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The death of Richard P. Rothwell, so long the editor and manager of the "Engineering and Mining Journal," which is chronicled on the following pages, is in some respects an irreparable loss. While it is most severely felt by his associates, it will make no difference in the conduct of the "Journal," which will continue to follow the lines laid down by him, and to aim at the high standard which it was always his object to maintain.

The figures given in the report of the Mountain Copper Company, which is published on another page, are not as complete as might be desired. So far as they go, however, they serve to confirm the opinions we have heretofore expressed in relation to this property. The ore tonnage seems to have reached its maximum point in 1898, showing a small reduction in 1899, and a very considerable one in 1900. At the same time there has been a reduction in the average copper contents, though a very small one. The directors have certainly acted very prudently in recommending that the profits for 1900 should not all be divided, but that $500,000 should be added to the reserve fund. This action gives the company a cash fund for the purchase of other mining properties; while the stockholders receive 16 per cent. on their stock for the year.

The difficulties which have arisen between the Amalgamated Association of Iron and Steel Workers and the tin-plate branch of the United States Steel Corporation have already caused a strike at one plant in Pittsburg, and may possibly lead to a general strike on the part of all the men connected with the association. It is to be hoped that the negotiations now pending may lead to a settlement, and that the general strike, which would involve over 25,000 men, may be averted. The points involved are not of such great importance in themselves as to preclude a compromise. The main point is that there is an evident disposition to join issues with the new combination, and to settle definitely its relations to the labor organizations. In some quarters it seems to be assumed that these must necessarily be of a hostile nature. We think, however, that is by no means necessarily the case; and we hope that the action taken in the Pittsburg trouble will show that our belief is well founded.

The announcement that the Amalgamated Copper Company is prepared to offer terms for the purchase of the stocks of the Boston & Montana and the Butte & Boston Copper companies, simply confirms numerous reports which have been current recently. The exact nature of the terms is not yet made public, but the purchase will probably be made by the issue of new stock of the Amalgamated Company in exchange for the shares of the other companies. The purchase will hardly make much difference in the copper situation, since it has always been understood or surmised that the Amalgamated was a holder of a large amount of Boston & Montana stock; while it was well known that the Butte & Boston could be had whenever it was wanted. The last-named company is of little importance as a producer, its chief value in this case consisting in its ownership in certain disputed claims, which affects the complicated litigation now pending in Butte. The Boston & Montana, however, is a large producer and owns both mines and extensive reduction and refining works.

The notice of the intended purchase has, of course, given rise to rumors of the purchase of other properties. These reports are based on no definite information, as a rule; some of them have an element of probability, while others are absurd. Many of them have been set afloat for speculative purposes entirely; for in the present temper of Wall street a "combination rumor" is enough to send up the price of any stock.

One point of importance is that the Amalgamated Company has evidently secured the co-operation of Senator W. A. Clark as owner of the United Verde Mines. It does not follow that a consolidation will be effected, but there seems no doubt of the alliance.

We have repeatedly urged the adoption by the United States and Great Britain of the metric system of weights and measures. We are convinced of the great advantages to commerce and industry which would result from such a change in system, although we recognize the difficulties which would arise from enforcing it by statute in this late stage of industrial development. Apart from the influence of legislation, however, we are of the opinion that it will come about naturally, because of the advantages that manufacturers themselves will perceive in the adoption of the system, far simpler than the English system, which is employed by all people of the world, except the English-speaking.

There are, however, many absurd systems of measure used by us, which could be changed without entailing difficulty upon anybody. One of these is the manner of indicating the strength of liquids, in which it is not only the Americans and British who preserve a con-

fusing system, but also the people of continental Europe. We refer to the hydrometrical measuring of specific gravity by arbitrary scales. American chemists employ the Beaumé scale; French and German chemists also use the Beaumé scale, but a different one from the American; while British chemists employ the Twaddell scale. The Twaddell scale has somewhat of a rational basis, since its zero indicates the immersion in distilled water at 60° F., and each degree on the scale is equivalent to a difference of 0.005 in specific gravity, wherefore the reading of the Twaddell hydrometer can be readily converted into terms of specific gravity. Not so, however, with the Beaumé hydrometer, the graduation of which is purely arbitrary, and not even the same on the hydrometers of the Beaumé system. It is true that a standard has now been agreed upon by American chemists and another standard by the European chemists, but the student who has to refer to text-books is always at a loss to know which standard is meant, and in the case of some of the older text-books there is a wild confusion. Thus in Gmelin's "Handbook of Chemistry," 46° B. is given as equal either to 1.468 or to 1.456 specific gravity, while in Crookes' "Select Methods" 46° B. represents 1.434.

Obviously the only rational method of indicating the strength of solutions is by their specific gravity, and wherever possible (the only difficulty would be in the case of mixed solutions) by the percentage of the chemical dissolved. Thus in the case of sulphuric acid, instead of referring to acid of 50° B., 60° B. and 66° B., we should refer to acid containing 62.15 per cent., 77.69 per cent. and 93.43 per cent. H_2SO_4 respectively. A person buying sulphuric acid would then be able to determine its value directly without the necessity of referring to tables. This is a change of method which could be effected without causing any inconvenience. It is certainly time that chemists should abandon their present cumbersome, confusing and antiquated method.

RICHARD P. ROTHWELL.

Richard P. Rothwell, editor of the "Engineering and Mining Journal" for 28 years past, and of "The Mineral Industry" since its beginning nine years ago, died at his residence in New York on Wednesday, April 17th, after an illness of five weeks. The immediate cause of his death was cancer of the stomach. His funeral took place on Friday, April 19th.

The death of the editor of the "Engineering and Mining Journal" (sudden and unexpected, though preceded by a serious illness) occurring just as the "Journal" is going to press, leaves no opportunity for the preparation of such a careful and adequate biographical notice of him as even a day's previous notice would have permitted. I must therefore content myself with a hurried sketch, doing scant justice to Mr. Rothwell's career, but expressing sincerely my admiration of his abilities and the heartfelt sorrow with which, both as a professional colleague and as a personal friend, I mourn his too early death. I shall claim the privilege of contributing hereafter to the "Transactions" of the American Institute of Mining Engineers a more complete and detailed account of his life and work .

Richard Pennefather Rothwell was born May 1st, 1836, at Ingersoll, Ontario, Canada, and, after studying at Trinity College, Toronto, entered the Rensselaer Polytechnic Institute at Troy, N. Y., where he was graduated as civil engineer in 1858. Shortly after, he went to Paris, and studied at the Ecole Centrale des Mines, from which he was graduated as engineer of mines in 1862. For a year thereafter he practiced as a mining engineer in France; in 1864 and 1865 he was engaged as mechanical engineer in London, in the manufacture of telegraph cables and wire ropes. From 1866 to 1873 he practiced as civil, mining and mechanical engineer in Pennsylvania, making his headquarters at Wilkes-Barre, where he was connected as consulting engineer with various collieries, etc. His genius and accomplishments as a mechanical engineer were evinced during this period by his design for the Hazard ropemaking works of a new and admirable machine for the manufacture of wire rope; and his writings published at that time give abundant evidence of his thorough knowledge of science and practice in civil and mining engineering. In the latter branch he showed himself specially acquainted with the conditions of colliery ventilation and the methods of dealing with fire-damp and with mine fires. That this knowledge was not mere learning, he proved signally on one occasion, when he headed a party of brave men who descended a colliery shaft after an explosion of fire-damp, to rescue the lives of others at the imminent risk of their own, and who, not only inspired by his courage, but also guided by his skill, successfully accomplished their heroic enterprise. This is one of those stories which a man's friend ought to tell with pride and gratitude over his open grave, especially when the man himself has never mentioned it, nor claimed credit for it. I keenly regret that I cannot now recall the story in detail; but that omission I shall take occasion to make good hereafter. I remember well that shortly after the event, Mr. Rothwell lectured at the Cooper Union in New York (in a course of which I had charge) on a subject connected with coal mining, and in one part of his lecture gave a vivid description of the conditions existing underground after a colliery explosion. But he suppressed so completely any note of personal experience that I could not resist the impulse to rise at the close of the lecture and inform the vast audience of the way in which the lecturer had come to know so much about it.

It was during his residence at Wilkes-Barre that Mr. Rothwell united with Eckley B. Coxe and Martin Coryell in issuing the circular of April, 1871, in response to which 22 mining engineers met at Wilkes-Barre on May 16, and organized the American Institute of Mining Engineers. Mr. Rothwell was elected the chairman of that meeting, but in the permanent organization he claimed no official honors. Of his two associates in founding the Institute, Mr. Coxe became at once a vice-president, and Mr. Coryell the secretary, but he accepted the position of simple manager. In 1872, 1873 and 1877 he was a vice-president; but it was not until 1882 that, without any suggestion on his part, he was unanimously elected president of the Institute. In 1898, 1899 and 1900 he served again as manager.

Partly through his contributions to the columns of the "American Journal of Mining" (later, and now, called the "Engineering and Mining Journal"), of which I was editor, and yet more by reason of our cooperation in the organization of the Institute, Mr. Rothwell and I became acquainted. In January, 1874, he became an editor, and afterward the owner of this journal. I had at that period acquired the somewhat doubtful asset of this ownership, which entailed upon me a considerable annual loss—partly because the enterprise was not yet established as a business, partly because I could not spare from other professional work the time and strength required for effective business management, and found it easier to pay the debts of the concern than to make it pay its own expenses. From the time when Mr. Rothwell assumed control of it, he gave himself to it with intense and unwearied devotion. What it became in his hands I will not here undertake to describe. It is its own best witness; and its subscribers are its best judges. But I cannot forbear to say, out of a very wide familiarity with technical journals of its class, that I do not think it now has, or has ever had in the past, among such periodicals, an equal in the world for combined commercial and technical value. I may say this the more freely since I have not been, for many years past, in any way concerned in its editorial management. Even while, under the friendly urgency of Mr. Rothwell, I continued to bear the title of his editorial associate, I was subject to his superior decision; and although I became, not seldom, restive under his polite but firm control of its columns, I recognized that he was the responsible manager, and (after more or less protesting) usually yielded to his decisions. Finally, when the "Journal" took editorially a position on the silver question with which I could not agree, and for which I found that I was being held responsible in many quarters, I withdrew my name as editor, and became nominally a "special contributor," without the least change in my cordial, friendly relations with Mr. Rothwell.

I mention this comparatively insignificant matter here, because it presents a striking illustration of Mr. Rothwell's manly independence as a journalist. I was a "gold bug;" an uncompromising advocate of the single gold standard; one of the experts to whom the United States coinage act of 1873 had been submitted before its presentation to Congress; and hence one of those who intelligently, with their eyes open, had approved and furthered the "crime of 1873," if crime it was. I would not have been surprised if Mr. Rothwell had taken the opposite view, or if, influenced by the wide circulation of the "Journal" in the West, he had at least abstained from editorial advocacy of either side, in the hot political fight which was waged on an economical subject. It was really not necessary that he should take sides at all in the matter. But what he did was to propose a solution not acceptable to either party; to advocate it persistently, not only in the "Journal," but in a separate book on the subject, and to do this at the cost of a great loss of patronage, both East and West. I did not think his peculiar view was sound, and I could not afford to be understood as agreeing with it; but I thought then, and I think now, that it furnished an instance of courage and independence, unaffected by personal interest, quite unusual in my experience. I say "personal" interest, for by that time all that Mr. Rothwell had in the world, either in property or in ambition, was staked on the success of the "Journal." I am glad to know that, after a period of serious loss of patronage, his enterprise recovered its prestige, and was even, as I trust, all the better supported for the exhibition of conscientious independence which he had made.

Not content with the arduous labors of the editorial and business management of the "Journal," Mr. Rothwell (as head of the Scientific Publishing Company, of which he was the principal stockholder) published many scientific and professional books of timely value, and, above all, began in 1893 the annual publication of a statistical and technical

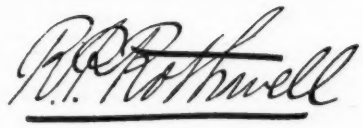
work, "The Mineral Industry," covering the whole field of the world's production and the world's mining and metallurgical progress. The first volume contained historic summaries of past years; and seven succeeding volumes have both continued and perfected the record. It would be easy to point out in such a summary, especially in one published (as this one has been) with such exceptional promptness, after the termination of each calendar year, errors of detail from which more leisurely official documents may be free; but the fact remains beyond question that Mr. Rothwell's "Mineral Industry" has possessed not only timely, but permanent value, and that the conception of such a plan, and its execution with so high a degree of intelligence and thoroughness, is well nigh unparalleled in statistical and technical literature.

To say of a man that he was one (and in many respects the most influential) of the three founders of the American Institute of Mining Engineers; that he practically created the "Engineering and Mining Journal," as the recognized organ of the technical practice and the business interests of mining and metallurgy; and that he conceived and successfully maintained the colossal undertaking of that annual review, "The Mineral Industry," is to vindicate for him a foremost place among the leaders of professional progress. This is not all that could and should be said, to complete even an outline of Mr. Rothwell's work; but it is enough to make a firm basis for his fame.

I will add only to this imperfect sketch my personal testimony of the unbroken friendship of more than a quarter of a century which I have enjoyed, and during which, notwithstanding many disagreements, there was not one quarrel, and not one doubt, on my part, of his sincerity, uprightness and loyal affection.

R. W. Raymond.

Dr. Raymond's sketch of Mr. Rothwell's life shows the preparation which he brought to what was his life work—the building up and conducting the "Engineering and Mining Journal," and of "The Mineral Industry," which was a natural result of the statistical work of the "Journal." Besides the knowledge acquired by study and experience, Mr. Rothwell possessed in an eminent degree the qualifications of an editor. He had a quick perception of the value of "matter"; he had an extraordinary memory and a keen sense of fitness and proportion. In an intimate association of over eight years in the editorial work of both the "Journal" and the "Industry," the writer learned to appreciate and rely upon these qualities and was never disappointed in the result. Beyond—and perhaps as a consequence of these qualities—he was never one of those who considered his work complete. He was a constant student and always open to new impressions, and he never hesitated to correct his work when convinced that it required amendment.



The statistical side of his work always appeared to him of especial importance and he gave much time and thought to it. He was well known among statisticians, both in this country and in Europe. Few men could analyze a compilation of figures more quickly and more thoroughly; and few could state results in figures in so compact and clear a form. It is to this that much of the success which "The Mineral Industry" has attained is due. He quickly detected errors and discrepancies in work of this kind.

Early in his work Mr. Rothwell set a high standard for the "Engineering and Mining Journal," and to this he constantly strove to adhere—or rather to approximate, for his disposition was never to be fully satisfied with results, but to aim at something better. His independence of thought and action has been referred to by Dr. Raymond; and indeed it was always his habit in considering the treatment of a question to think only of what was right, and not of possible consequences to himself. While favoring legitimate mining enterprise in every way, he had no mercy for fraudulent enterprises and their promoters, as the columns of the "Journal" show, and as its old readers will recall. This was a direct result of his determination always to seek the best.

He always laid great stress on the "Journal" as an educational force, and it was probably this thought which led him to take an interest in correspondence schools, and finally to connect himself with the United Correspondence Schools of New York, of which he had been president for two years previous to his death.

Mr. Rothwell was a member of many clubs and societies and he received high recognition both at home and abroad. Besides his membership in the American Institute of Mining Engineers, above referred to, he was a member of the Societe de l'Industrie Minerale, and of the Geological Society of France (Paris), and an honorary member of the Institution of Mining and Metallurgy, London, England, and of the Australasian Institute of Mining Engineers, New South Wales. He was a Fellow of the Geological Society of London, England; of the Imperial Institute, London, England, and of the Royal Statistical Society of Great Britain, and a member of the Federated Institute of Mining Engineers, Great Britain; of the Society of Chemical Industry, London, England; of the American Society of Civil Engineers; of the American Statistical Association; of the American Trade Press Association, and of the New England Free Trade League. He was a member of the Lotos, the Reform, the Hardware, the Larchmont Yacht and the New York Press Club. He had charge of the statistics of gold and silver for the United States Census in 1890. At the Paris Exposition, in 1898, the Societe d'Encouragement pour l'Industrie Nationale de France awarded to him as Editor of "The Mineral Industry" a gold medal. He was married in 1862, and leaves one daughter, Mrs. P. L. Donlan.

A few words may be added on the personal side of Mr. Rothwell's character. Those who have met him and know him appreciate the charm of his manner and conversation, and will not forget the cordiality with which he was accustomed to greet his friends. It was inevitable that a man in his position should make some enemies; but his feeling toward them was rather critical than hostile. However much he might reprobate the offense, he did not personally hate the offender.

To his associates and assistants in his work he was a strict but kindly critic, and he did not criticise without reason, as they were generally ready to admit in the end. He expected from them adherence to the high standard he had fixed for the work of the "Journal," and his criticisms were intended to help them in working to that standard. He supervised carefully the work done in his office; and he never failed to revise carefully the proofs of the "Engineering and Mining Journal" except when absolutely prevented by sickness or necessary absence. He was always ready with suggestions, and it was very seldom that these were not apt and appropriate to the work in hand. His remarkable memory was a constant aid to his associates, and he frequently gave copious references to authorities on questions under discussion, without hesitation and on a moment's notice.

More than this, there is no one who has been associated with him for any length of time who cannot recall kindnesses shown and favors granted—always quietly done and never referred to afterward on his part. In expressing the sincerest sorrow for his loss, I know that I speak with the fullest approval of my associates.

Frederick Hobart.

NEW PUBLICATIONS.

"Steam Boiler Economy: A Treatise on the Theory and Practice of Fuel Economy in the Operation of Steam Boilers." By William Kent. New York: John Wiley & Sons, 1901. Pages, 458; illustrated. Price, $4.

The author of this treatise is well known to the readers of the "Engineering and Mining Journal" through his contributions to our pages and the various volumes of "The Mineral Industry"; also as the author of the highly valuable "Mechanical Engineer's Pocketbook." Many of the important papers which have appeared in those publications are reproduced in the present treatise. Mr. Kent's experience in steam-boiler practice has been so long and so varied and his method of thought is so lucid and analytical that whatever he has to say upon his specialty may be safely considered as authoritative. The reader of his new treatise will not be disappointed.

The plan upon which "Steam Boiler Economy" is written differs from that adopted in the preparation of all the other treatises on steam boilers with which we are acquainted. In most of them the greater part of their space is devoted to details of construction and only a small part to the subject of fuel economy and the practical use of boilers. The design and construction of steam boilers is of course a highly important subject, but it is of more interest to the manufacturers who are engaged in building them than to the engineers and business men whose chief concern is in their commercial economy. Mr. Kent has written his book for the aid of the users of steam boilers and not for the builders. In doing this we feel sure that he has supplied a long-felt want.

The scope of this new treatise comprises the chemistry of fuel and combustion, the calorific power of various coals and fuels other than coal, the principles of steam generation, the types of boilers now on the market, the proportions of grate and heating surface, etc., that a good boiler should have, the difficulties experienced in the practical use of a boiler, and the methods of boiler testing. There are besides tables of the properties of water and steam, factors of evaporation and miscellaneous data, together with a brief discussion of the principles of fuel-economizer installations and the proportions of chimneys.

The first part of the volume comprising 144 pages is devoted to the subject of fuel, chiefly coal, and its combustion. It constitutes the most practical and comprehensive treatise upon that particular subject that we know of; nowhere else is the difference in the commercial value of various coals so clearly set forth. It is recognized now that a large part of the older determinations of calorific power are unreliable because of inaccuracies in the methods of determination. Mr. Kent has devoted much study to those results and discriminates among them those which may be accepted and those which ought to be rejected. Anyone who has occasion to use such data should do so therefore only with the aid of Mr. Kent's book. It is to be regretted that Mr. Kent has limited himself so exclusively to a discussion of the employment of coal by direct firing and has not gone more fully into the subjects of firing with natural gas and producer gas. The subject of coal-dust firing is scarcely treated at all.

Mr. Kent properly considers a steam-generating plant as being composed of two parts, (1) the boiler itself and (2) the furnace or firebox as an apparatus separate and distinct from the boiler. In the chapter on the latter he describes its proper location and design, the methods of firing, smoke prevention, the efficiency of mechanical stokers and forced draft. We think that his discussion of chimneys would better have been incorporated in connection with this chapter than to be assigned to the last part of the book, and we may remark also that in our opinion a good deal fuller discussion of chimney draft theory and the design and proportions of chimneys would have been advantageous. We wish, moreover, that more attention had been devoted to the subject of mechanical stokers, in connection with which it would have been desirable to cite results of the economy obtained through them as demonstrated by practice. We know that such reliable data is difficult to secure, but it surely is not impossible to do so. The highly important subject of mechanical draft, toward which steam boiler practice is now tending, is passed over with a very brief reference. In these respects Mr. Kent's treatise is deficient.

The chapter on the elementary principles of steam-boiler economy and capacity which is based on a discussion of the simplest form of a boiler, namely, the plain cylinder type (which is still employed to some extent in the anthracite coal regions) is extremely lucid. It presents the subject to the non-expert reader in a manner which he cannot fail to understand, whereas, if a more complex modern boiler had been assumed as the type, the clear exposition of the principles would have been lost in the mass of necessary explanatory details. The subsequent chapters on efficiency of heating surface, types of boilers, boiler horse-power, etc., which are thus led up to, are very complete and meet all the demands for information upon those subjects which most readers will make.

We consider that Mr. Kent's treatise on "Steam Boiler Economy" is one that ought to be in the hands of every person who owns or operates a steam boiler, even if it be so small as only 10-H. P. capacity, since a thorough study of the principles expounded therein cannot fail to lead to an increase in boiler economy. Few users of coal for the generation of steam realize what room for saving there is. The production of coal in the United States in 1900 was about 275,000,000 short tons valued at about $322,000,000. Of course not all of that vast consumption is for making steam, but a large percentage of it is. The possibility for saving is thus summarized by Mr. Kent:

"The efficiency commonly obtained in practice in the Western States with bituminous coals burned in ordinary furnaces is not over 60 per cent., and is often less than 50 per cent. Probably 55 per cent. is a fair average. The highest efficiency obtainable under the best conditions, with mechanical stokers and with furnaces adapted to burn the volatile matter of the coal, is about 75 per cent. The difference, 20 per cent, divided by 75 per cent, or 26 2/3 per cent., is the margin for saving. If only half of this saving, or 13 1/3 per cent., can be made, and this is easily possible by the introduction of improved methods of burning Western coals, the reduction of the cost of coal used for steam purposes, were these improvements generally adopted, would amount to many millions of dollars a year. This is the most important improvement that can be made in existing American boiler practice."

BOOKS RECEIVED.

In sending books for notices, will publishers, for their own sake and for that of book buyers, give the retail price? These notices do not supersede review on another page of the Journal.

"Pays de Caoutchouc." By Eugene Ackermann. Rixheim; F. Sutter & Cie. Pages, 64; illustrated.

"Nicaragua or Panama." By Philip Bunau-Varilla. New York; published for the author. Pamphlet, pages 32; with maps and diagrams.

"Mines and Mining in the Black Hills, South Dakota." Prepared and issued by the Passenger Department, Burlington Route. Pages, 48; illustrated.

"La Memoria del Director-General del Registro Civil de la Provincia de Santa Fe. Argentine." Ulises R. Mosset, Director-General. Santa Fe, Argentina; published for the Province. Pages, 100.

"Report on the Inspection of Mines in India for the Year 1899." Edited by G. F. Reader from notes by James Grundy, Inspector of Mines. Calcutta, India; Government Printing Office. Pages, 22.

"Clays of New York; their Properties and Uses." Being Bulletin No. 35, Volume 7, of the New York State Museum. By Heinrich Ries. Albany, N. Y.; published by the University of the State of New York. Pages, 944; illustrated.

"The Kolar Gold-field. Quartz Mining and Gold Recovery as Practised in India." Volume XXXIII, Part I, Memoirs of the Geological Survey of India. By Frederick H. Hatch. Calcutta, India; Government Printing Office. Pages, 84; illustrated.

"Public Water Supplies. The Requirements, Resources and Construction of Works." By F. E. Turneaure and H. L. Russell. With a chapter on "Pumping Machinery," by D. W. Mead. New York; John Wiley & Sons. Pages, 760; illustrated. Price, $5.

CORRESPONDENCE.

We invite correspondence upon matters of interest to the industries of mining and metallurgy. Communications should invariably be accompanied with the name and address of the writer. Initials will only be published when so requested.

Letters should be addressed to the MANAGING EDITOR.

We do not hold ourselves responsible for the opinions expressed by correspondents.

Explosive Gas in Metalliferous Mines.

Sir: I have been interested in reading of the occurrence of explosive gas in a metalliferous mine, as described by Mr. F. W. Grey in your number of March 30th. A similar occurrence has recently been noted in these mines, generally known as the Carmen Group, though now known as Minas Viejas. Fortunately, in this case, no explosion resulted.

The circumstances were the following: On the Carmen Claim of the group there is an enormous chimney of iron and clay in the limestone, practically circular in plan, of some 500 ft. in diameter, which has been honeycombed by the irregular Mexican workings in search of the detached bodies of lead carbonates which occur throughout its mass. The ground was, of course, very heavy, and all these workings were heavily timbered. They were reached through two shafts; one, the San Jose, in the surrounding limestone, and still in good condition; the other, the Clayton, sunk inside the limits of the soft ground and now caved clear to the surface. Much caving has taken place over the whole area of the chimney, so much that the larger part of it has subsided some 40 ft. from its original surface level. In more recent years a tunnel was driven to tap the chimney at about 400 ft. below the level of the collar of the San Jose shaft, but, though the ground is thoroughly opened up at this level, nothing but iron stringers and seams were found, making down from the body above. From one of the tunnel branches communication was effected through the southerly portion of the caved ground with the San Jose shaft, thus securing ventilation and a means of robbing what few pillars of ore were left.

Some few months ago it was decided to try and reach the northernmost limits of the old workings, where were said to be some breasts of ore from which the operators were driven by a sudden and general caving in that region some 15 years ago. It was found that this could best be done by a short cross-cut from the main tunnel near the breast to reach the bottom of the Clayton shaft, which was believed to be down to the tunnel level. Communication was effected after about 20 ft. of cross-cutting and 25 ft. of raising, the shaft having lacked so much of being down to the tunnel level. As the shaft could not be exactly located, the subsidence caused by its caving having been levelled off, it has been found since entry was possible that the holing through took place at a point about 10 ft. from the wall of the shaft into a short level which had been started from the very bottom. The shot which effected the communication left a hole about 1 ft. in diameter, and on entering the raise the men noted that, as they ascended, the candle flames grew longer and longer, until they finally were extinguished. No great amount of bad odor was noticeable, but had there been any the smell of the powder would have concealed it. Orders were immediately given that nobody should attempt to enter, it being believed that while the gas had then so thoroughly replaced the air in the old working as to be non-explosive, as soon as it had a chance to mix with the incoming air by diffusion a severe explosion might result. Measures were also taken to effect another communication for ventilation from the workings above referred to as connecting the tunnel with the San Jose shaft.

Now that entrance to the raise and shaft is possible, it is found that

the shaft is completely filled with a mixture of wet clay and much old timber which is rotted to punk. This rotting timber was undoubtedly the source of the gas, which was probably marsh gas, as Mr. Grey believes in the case he describes. Many old mines are being opened up in this republic, and these instances emphasize the need for the caution that should be used in opening old caved workings which have remained unventilated for many years. Allen H. Rogers.

Villaldama, Mexica, April 4, 1901.

Iron and Steel Making in the United States and in Europe.

Sir: For many months past the press of both the United States and Great Britain has been discussing earnestly the relative conditions affecting the manufacture of iron and steel in the two countries, and giving various reasons why the mills of the United States are able to put those products on the market at a lower rate than is possible in Great Britain. Writers on the subject appear to lay the praise or blame, as the case may be, on the superiority of machinery, of the workingmen in the United States, American energy, etc.; but, as far as I have read such articles, no one has touched upon conditions which appear to me to be among the chief causes of the present relative state of the iron manufacture in the two countries. I do not pretend to be an expert on this subject and submit this letter hoping others may take up the matter and give your readers the actual facts and figures in the case.

In England coal is more expensive, partly because many of the beds are small, some of them being only a few inches thick; at the same time the mines are deep and have a large flow of water to contend with. The question of limestone for flux, clay for fire brick and other materials may also have some bearing on the cost of producing iron, but the main point is the source and quality of the iron ores used. The bulk of the iron ores in this country probably carry 50 to 60 per cent. of iron, and in case of magnetite even more, so that about 2 tons of ore should produce 1 ton of metal. In addition to this, immense beds of iron ore are found at the surface in such position that they can be loaded on the cars for less than 20c. per ton. Whereas in Great Britain practically all the high-grade iron ores are imported from various parts of the world, largely from Spain, Norway and Sweden, and consequently have to stand the cost of transportation in the country of origin, followed by sea transportation, and finally railway rates from ship to furnaces; thus such ores cannot possibly be laid down at the furnaces at a low rate. As to the principal ores mined in Great Britain—for instance, in Scotland and Yorkshire—the percentage of iron in the ore varies, I understand, between 22 and 28 per cent., so that in order to produce one ton of metal 4 tons of ore must be mined and smelted instead of 2 tons as in this country. In addition to this large excess of ore required a larger quantity of limestone must be smelted, for, as the per cent. of iron falls, flux must be added to take up the additional proportion of impurities.

If these statements are even approximately correct, it is small wonder that the English smelters are unable to compete with the United States, and their position is hopeless. Seeing the superiority and abundance of our natural resources, the marvel is not that we are able in certain cases to compete with Great Britain, but that we do not supply that country itself with all the iron required. There can be little doubt of our being able to do so, if ever the burden of protection can be lifted from the iron smelting trade.

Should this letter lead to the publication of correct facts and figures on these lines by some of your numerous readers, it will probably throw valuable light on the present discussion. John Longmaid.

Helena, Mont., April 7, 1901.

MINING ACCIDENTS IN MONTANA.

The report of Mr. John Byrne, State Inspector of Mines of Montana, for the year ending November 30th, 1900, gives some interesting facts in relation to the mines of the State, the accidents occurring and the general conditions prevailing.

The report gives the number of mines inspected, the number of men employed and the accidents reported as follows, for three years past:

	1898.	1899.	1900.
Mines inspected	136	165	163
Men employed	11,096	12,516	13,996
Fatal accidents, number	48	49	47
Fatal accidents per 1,000 employed	4.32	3.91	3.36
Non-fatal accidents	29	22	35
Non-fatal accidents per 1,000 employed	2.61	1.75	2.50
Total accidents	77	71	82
Total accidents per 1,000	6.93	5.67	5.86

Of the fatal accidents last year 40 were in metal mines and 7 in coal mines. The causes given are: Explosion of blasting compounds, 16; falls of rock, 10; falling coal, 2; by cages in shafts, 6; falling down shaft, 3; falling down upraise, 1; falling from bucket while being hoisted, 2; falling down ore-chute, 1; suffocated by powder gas, 3; material falling down shaft, 1; crushed by mine car, 2.

Mr. Byrne says, in his report:

"Investigation into the various causes from which these deaths resulted shows that at least half of them could have been avoided by the exercise of ordinary prudence on the part of the deceased. A fair proportion of the others were no doubt unavoidable. To the indifferent methods and contempt of an organized and regulated system of operations on the part of some managements may justly be attributed the remainder of the fatalities. As a matter of fact, all our large mines are provided quite generously with the means necessary to make safe conditions and provide against accident, but of what use are they unless their use is systematically insisted on by those in authority? . . .

"One of the chief causes of accidents in the large mines and the one tending most to nullify the best intended plans of the owners for the protection of the miners is the lack of a uniform policy of administration and diversity of purposes sought to be accomplished between the superintendent and foreman on the one hand and the shift bosses on the other. The superintendent and foreman, as a rule, try not to lose sight of the condition of the mine while bending every effort to secure the best results in production; yet the shift boss is animated solely by a desire to mine and hoist the greatest possible tonnage regardless, to a great extent, of the conditions as to timbering, etc., of the working places, and as a rule a rivalry exists between the bosses on respective shifts, each trying to add to his reputation by hoisting more tons than the other fellow. Such methods tend naturally to increase the hazard of the miner and cannot even be justified as profiting the owner because it is destructive of his best interests.

"An earnest effort has been made by this department to improve the methods of storing and thawing powder underground. Every wooden box and every apparatus constructed of wood in which the heat was furnished by a candle, found doing duty as a thawing device, was condemned and an apparatus made of some metallic substance constructed to furnish the required heat by hot water contained within it was recommended. Of the 16 fatal accidents resulting from explosions none are chargeable to explosions from magazines or thawing devices. . . .

"I am pleased to report that the law enacted by the Fifth Legislative Assembly providing for the equipment of hoisting cages with doors or gates to be closed when men are being lowered into or hoisted out of the mines, the validity of which was contested in the courts by the Anaconda Copper Mining Company, was sustained by the Supreme Court of the State in a decision handed down on January 29th. Immediately following all shafts coming within the provisions of this law were equipped in accordance with it. . . .

"The coal mining industry of the State has developed sufficiently both in the number of the mines and the men engaged in them to justify a larger share of attention. The ventilation, so essential to the coal miner, and proper maintenance of such vast systems of workings should be given the attention by the State that their importance demands. Quarterly inspections should be made by a competent officer who would at all time effectually apply the laws and regulations governing coal mines. In order to provide this urgent need, I earnestly recommend that the present law be amended by providing two deputies for this department, one of whom shall be a qualified coal miner. I would recommend the amendment of H. B. No. 17, Session Laws of 1897, which provides for an opening independent of the main working shaft or incline, so as to make its main provisions applicable to all mines which are worked through a tunnel or adit opening, and prohibiting the erection of any but a fire-proof building within 30 ft. of all drift or tunnel entrances which have no escapement outlet.

"Section 705, Penal Code, providing for safety apparatus, in so far as it relates to safety cages, when a greater depth than 300 ft. has been attained, is very defective and should be remedied to read as follows: It is unlawful for any corporation or person to sink or work through any vertical shaft, or any incline shaft, having an inclination of 70° or more, to a greater depth than 300 ft., unless said shaft shall be provided with a cage or skip, said cage or skip to be provided with an iron bonnet and safety catches, to be used in the lowering and hoisting of employees thereof. . . . .

"The rate of speed at which employees are lowered into and hoisted out of shafts should be regulated by law. The maximum rate should not exceed 700 ft. per minute, except in shafts where the cages are provided with doors, when a rate of 800 ft. per minute may be safely allowed. The danger arising from poorly constructed cross-heads and from those of short length calls for their regulation by providing that cross-heads shall not be less than 6 ft. in length and providing a penalty for making cross-heads of less length. The law should also prohibit stoping up to a shaft and provide for a pillar to be left that will insure the safety of the shaft; and it should provide a penalty for a violation of this rule."

IRON AND STEEL IN TURKEY.—Though in nearly all the Turkish provinces iron ore is to be found, there are no blast furnaces nor manufacturing shops, and the finished iron business is of the most limited description. The imports into Turkey, both in iron and steel, are consequently of considerable importance, amounting to 60,000 tons annually. Imports at Constantinople alone are, on an average, 20,000 tons. Chief supplies are sent from Sweden and Belgium, while England, which takes the first place in all other trade with Turkey, sends only about 6,000 tons per annum.

THE NATIONAL BUREAU OF STANDARDS.—The "Popular Science Monthly" says: "The bill establishing a National Bureau of Standards, which was passed by Congress in the closing hours of the session, is a measure of unusual importance for science and for industry. Such an institution has long been urgently needed. Germany expends $116,000 annually on its corresponding institutions, and it is not difficult to trace an immediate connection between its Reichsanstalt and the supremacy of German scientific instruments and the increasing manufactures and export trade of the nation. Great Britain has recently been persuaded by the British Association and the Royal Society to extend its work, and is now erecting a new physical laboratory, while it provides $62,000 annually for the cost of its different institutions engaged in standardizing and experimental tests. In the United States the sum of only $10,400 has hitherto been set aside for the Bureau of Standard Weights and Measures, which has now been converted into a National Bureau of Standards. For the bureau a building is to be erected which may cost $250,000, though only $100.000 is at present appropriated; $25,000 is allowed for land and $10,000 for equipment. The salaries amount to over $27,000 annually, and the sum of $5,000 is given for current expenses. The bureau has been inaugurated under the most favorable auspices. Urged by scientific men and societies, on the one hand, and by engineers and manufacturers, on the other, the bill passed both Houses of Congress almost without opposition. This was in large measure due to Secretary Gage and to the Hon. James H. Southard, Chairman of the Committee on Coinage, Weights and Measures, who gave the measure careful consideration and, impressed with its importance, used every effort to secure its passage. The President has already appointed a most excellent director in Professor Stratton, who has now leave of absence from the University of Chicago to take charge of the Bureau of Weights and Measures."

A LARGE ELECTRIC LOCOMOTIVE.

The convenience and simplicity of electric haulage for coal mines was early recognized, and the increasing demand for electric locomotives is ample evidence that they have met the requirements. The necessity for locomotives of large capacity has grown with the output of mines, but the original low and narrow entries have proved a serious obstacle to their use. To meet the demand for a locomotive of large hauling capacity, and yet of so compact a form that it can be used in the average entry, the Jeffrey Manufacturing Company, Columbus, O., has brought out among its later designs the 20-ton locomotive shown in the illustration.

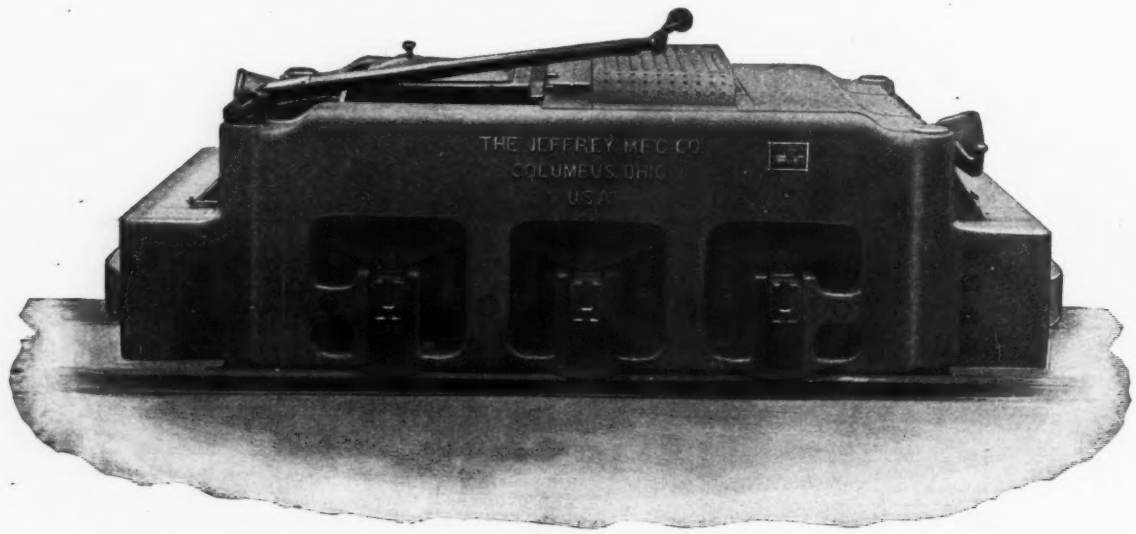
The rated draw-bar pull of this locomotive is 8,000 lbs. The speed ranges from 6 to 10 miles an hour, depending on the load. Under test the locomotive developed over 11,000 lbs. draw-bar pull before the wheel slipped. The motors, however, are of ample capacity to skid the wheels on the best track when using sand. It is equipped with three 60-H. P. motors, each geared to an independent axle and pair of drivers. Dividing the power between three motors effects a great saving in the width and height of the locomotive over one of the same capacity having but two motors. The driving wheels are pressed on, and keyed to special, hammered open-hearth steel axles. The wheels themselves are of the open-plate cast-iron type with chilled tread. The journal bearings are of a type which meets the approval of the Master Car Builders 'Association. They are made of a very tough and durable bearing metal, and are of sufficient size to make the pressure on the journals well within the safe limit. The wheels being inside the locomotive frame, the journal bearings are accessible for oiling, or for renewing the linings. The journal boxes are dirt-proof, which insures long life to the bearings. The frame of the locomotive is of massive iron castings, rigidly bolted together with heavy steel bolts, and supported by equalizing leaf springs, which rest in suitable chairs on the journal boxes. The frame covers are of sheet iron hinged in such a manner as to allow easy access to all interior parts of the locomotives.

The brake mechanism is very simple but effective. Pressure on the six brake shoes is equalized by a system of levers. The brakes are operated by a screw which is keyed into the hub of the hand wheel. No ratchets and pawls are necessary for locking this brake mechanism, as the screw makes it self-locking in any position. The mechanical advantage is such that the operator can easily skid the wheels of the locomotive. Sand boxes of large capacity are provided at both ends of the locomotive and the operating levers for the sand valve are placed within convenient reach of the operator.

The motors are water and dust-proof. They are wound for either 220 or 500 volts. The motor frames are of cast steel, designed to meet the exacting requirements of mine service. The armature shafts are made of high-grade crucible steel and both the armature shaft and axle bearings are made of the best bearing bronze obtainable, carefully bored to alignment and scraped to fit before assembling. The commutators are made of drop forged copper segments insulated with the best mica. The controller used on the locomotive is the Jeffrey Class 9. It has specially large, milled contacts, and is so arranged that the motors may be run either in series or in parallel. The operating levers are conveniently located. The resistance coils, which are of ample capacity, are located at the top of the locomotive, and so arranged that there is a constant circulation of air about them, which keeps them cool. On either side of the locomotive frame is a cored receptacle for the Jeffrey standard trolley base, which admits of the trolley pole being placed to suit the mine wiring.

Every motor used on the Jeffrey locomotives is given a full load and over-load test before placing on the locomotive. After the locomotive is complete it is placed in a special testing frame and made to run the equivalent of several miles under load in both directions. It is also subjected to a series of severe electrical and mechanical tests in order that any defects of any sort may be discovered before shipping.

The locomotive shown in the illustration is the largest and most powerful electric locomotive for mine use which has yet been built. Already a number of them have been put into service.



THE JEFFREY 20-TON ELECTRIC MINE LOCOMOTIVE.

THE MINERAL PRODUCTION OF COLORADO.

In our issue of April 6th we gave from an advance sheet the values of gold, silver, lead and copper produced in Colorado in 1900, the statement being by counties. We have now received the full report of Mr. Harry A. Lee, Commissioner of Mines of the State, and we reproduce here the values of the metals named, adding the quantities produced and the average prices, as shown in the following table:

	Quantity.	Av. price.	Value.
Gold .....Oz.	1,391,487	$20.67	$28,762,636
Silver ..... "	20,336,712	61.4ic.	12,488,775
Lead .....Lbs.	164,274,762	4.73c.	7,770,196
Copper ..... "	7,826,949	16.52c.	1,293,612
Total values	.....	.....	$50,314,019

The corresponding values in 1899 were $48,320,342, showing an increase last year of $1,993,677, or 4.1 per cent.

The report gives many interesting particulars about the other mineral products of the State from which we take the following particulars:

Coal.—The production of coal for two years past is shown in the following table, in short tons:

	1899.	1900.	Changes.
Lignite	695,750	822,916	I. 127,166
Semi-bituminous	793,245	891,554	I. 98,309
Bituminous	3,278,877	3,697,020	I. 418,143
Anthracite	59,067	59,244	I. 177
Estimated from mines not reporting.....	.....	25,000	I. 25,000
Totals	4,826,939	5,495,734	I. 668,795

The increase over 1899 was 668,795 tons, or 13.9 per cent. The output for 1900 was the largest ever reported.

Coke.—In 1899 there were 1,144 coke ovens in use and the production of coke was 464,332 short tons; in 1900 the number of ovens was increased to 1,412, and the coke production to 575,447 tons; an increase of 111,115 tons, or 23.9 per cent. The coal consumed in coke manufactured is included above in coal produced.

Iron.—A large proportion of the iron ore produced in the State is utilized by the various smelting plants as a flux. All the ore produced for the manufacture of iron is owned or purchased by the Colorado Fuel and Iron Company. This company has large holdings of both coal and iron throughout the State, and of late has been extending its possessions into New Mexico, Utah and Wyoming. The official statement of this company shows the gross value of steel and iron produced during 1900 to be $5,684,620; coal and coke, $6,088,819, making a total of $11,773,439. The manufacturing plant of this concern is located at Pueblo and it is being thoroughly modernized. The improvement provided aggregates nearly $3,000,000. The comparative production for the years 1899 and 1900 is as follows, in pounds:

	1899.	1900.	Changes.
Iron ore	495,542,050	539,715,810	I. 44,173,760
Pig iron	215,855,452	265,475,854	I. 49,620,402
Spiegel	9,384,233	8,388,600	D. 995,633
Steel rails	160,940,363	240,700,457	I. 79,759,094
Steel plate	3,040,291	3,412,051	I. 371,760
Merchant iron	63,942,461	55,476,561	D. 8,465,900
Castings	16,885,280	22,262,144	I. 5,376,864
Iron pipe	16,066,595	16,070,133	I. 63,538
Spikes, bolts, nuts.....	18,612,877	16,141,601	D. 2,471,276

Zinc.—Zinc ore has become an important factor in Colorado mining. Owing to advance made in metallurgy of zinc during the past few years, a product heretofore deemed by the miner not only worthless, but detrimental, may now prove valuable.

Zinc occurs as an associated mineral in nearly every metalliferous mine operated in the State. In some localities the zinc contents so predominate as to have prohibited mining for the precious metals at a profit. This is due to the fact that the lead smelters charge a penalty for zinc contents by adding a fixed amount to treatment charges for each per cent. of zinc above a certain limit. Ores, therefore, with high zinc and low gold-silver-lead values, could not be mined and marketed at a profit. In many mines the percentage of zinc present in the ores marks the dividing line between the so-called "ore" and "waste." As a result the large production of "ore" carrying the precious metals in

the various mining camps has developed great zinc reserves that remain untouched in the mines. This is especially true of the Leadville District. The zinc ores of Colorado are in the main a complex mixture with other sulphides, carrying gold-silver-lead values. By the use of the Wilfley, Bartlett and other tables, some success has been attained. At Creede and Leadville the ores have been separated into two products. Zinc and iron-lead-silver. The primary object was a marketable product for the lead smelters, and incidentally a by-product having zinc value sufficient to make the enterprises as a whole profitable. At the present time, owing to the immense bodies of zinc ores developed, zinc as the primary and iron-lead-silver as a secondary product are receiving careful consideration.

The zinc production for 1900 amounted to 77,984 tons, averaging 42 per cent. metallic zinc. The prices on board cars at place of production ranged from $4.50 to $15 per ton. About 40 per cent. of this production was exported to Europe and Canada, the remainder being marketed in the United States. Lake, Mineral, Chaffee, Eagle, Gunnison, Saguache, Clear Creek, Custer, Pitkin, Ouray, Dolores and Summit counties produced the zinc ores. The indications for 1901 are a largely increased zinc product.

Manganese Ore.—During 1900 Lake County produced 74,600 short tons of manganese ore, which was sold to the Colorado Fuel and Iron Company and the Illinois Steel Company for the manufacture of spiegeleisen and ferro-manganese. This ore averaged about 23 per cent. manganese, and was worth about $2.75 per ton at mine.

Bismuth.—In 1900 there was a production of 442,500 lbs. bismuth ore from the Ballard, Big Six and Penn mines at Leadville. Of this 300,000 lbs. averaged 10 per cent. metallic bismuth and 142,500 lbs. about 8 per cent. The gross bismuth value was about $26,500, or $15 per unit. No specific report of the gold and silver contents is obtainable beyond the statement that some of the ore carried as much as 9.5 oz. of gold and 7.5 oz. silver per ton, for which the producers received full value, less customary deductions for treatment charges. All this ore was purchased by the Leadville Sampler, Leadville, the State Ore Sampling Works, Denver, or was shipped direct by producer to Johnson, Matthey & Company, Limited, London, England. The present market condition appears favorable, and the following prices are offered by the State Ore and other sampling works for ores, delivered at their works: Ores carrying 8 to 10 per cent. bismuth, $10 per unit; 10 to 12 per cent. bismuth, $11; 12 per cent. and over bismuth, $11.50 per unit.

Bismuth is found in the State in various forms, the most notable identified being as follows: Native bismuth, Summit, Jefferson, Boulder and Larimer counties. As a carbonate, Larimer, Boulder, Lake and Chaffee counties. As a tellurate and telluride, Boulder and Ouray counties. As a sulphide, Clear Creek, Larimer, Summit, Jefferson, Boulder, San Juan and Ouray counties. As a sulphobismuthite, Park, Custer, Ouray, Hinsdale, Clear Creek, La Plata, Boulder, San Juan and Lake counties.

Other Metals.—The production of tungsten ore was 91,000 lbs., of which 11,000 lbs. came from San Juan County and 80,000 lbs. from Boulder County. It was sold at from $2 to $3.50 per unit, delivered in the East. The ores run from 65 to 71 per cent. tungstic acid.

The production of uranium ore in 1900 was 306,655 lbs., of which 293,500 lbs. was mined in Montrose County, and 13,155 lbs. in Gilpin County. The ores varied in value, running from 5 up to 16 per cent. uranium oxide.

ABSTRACTS OF OFFICIAL REPORTS.

Exploration Company, Limited, London.

This company's statement of accounts for the year ending December 31st, 1900, shows gross profits of £151,608, while transfer fees were £461, making a total of £152,069. The charges were as follows: General expenses, £19,474; directors' fees, £5,000; sundry investigation expenses, £19,530; depreciation, London building and fixtures, £1,200; total £45,204, leaving a balance of £106,865. The balance from previous year was £53,787, making a total of £160,652.

The directors' report says: "The statement of accounts shows a net realized profit for the year 1900 of £106,865, which, with £53,787, undivided profits brought forward from the year 1899, makes a total of £160,652 standing to the credit of profit and loss as at December 31st, 1900. The directors regret, however, that they cannot recommend the payment of a dividend as the estimated depreciation on investments at December 31st exceeded the amount standing to the credit of profit and loss; and a further depreciation has since occurred, mainly due to the fall in shares of the Compagnie Generale de Traction, and of the tramway companies in Paris, in which this company is largely interested. The directors are of opinion that the business above referred to is sound and capable of great development. The amount of depreciation, as estimated on April 11th, is £310,652, of which the directors regard £129,236 as permanent. To meet this they have written down specific assets to the extent of £129,236, taken from reserve, and to provide the balance they have created a contingency account of £181,416, by transferring thereto the £160,652 undivided profits and an additional £20,764 from the reserve.

The directors are satisfied that, under existing circumstances, it is in the best interests of the shareholders to make this large provision, but they trust that conditions will so improve as to enable them to reduce this account. Among the important investments of the company there are included large holdings in the Central London Railway Company, the Electric Traction Company, Limited, El Oro Mining and Railway Company, Limited, and in South African mining shares and real estate, which the directors continue to regard with much satisfaction.

Mountain Copper Company, California.

The report of this company for the year ending December 31st, 1900, as issued from the London office, does not give any statement of gross receipts or working expenses. The financial statement shows profit on sale of copper, £311,891; rents and miscellaneous, £6,238; total, £318,129. The charges against this are: London expenses, £6,675; interest and income tax, £8,920; investigation work, £2,264; total, £17,859. leaving a surplus of £300,270. The balance from 1899 was £5,240, making a total of £305,510. The payments from this—including a dividend declared, to be paid April 24th, 1901—were for dividends, £200,000; reserve and depreciation fund, £100,000; total, £300,000, leaving a balance of £5,510 forward to current year. The reserve fund now amounts to £250,000. The dividends were 9s. per share paid in October, 1900, and 7s. in April, 1901; at total of 16s. per share, or 16 per cent. on the total capital stock of £1,250,000.

The ore extracted and smelted and the copper produced have been as follows, in short tons of 2,000 lbs.:

	1897.	1898.	1899.	1900.
Ore extracted	165,060	221,895	203,965	179,694
Ore smelted	97,185	168,514	176,689	207,571
Copper (in matte form) produced at Keswick	7,238	10,721	10,664	11,978
Copper produced at New Jersey Refining Works	5,958	8,273	11,388	11,443
Copper sold	6,025	8,273	9,647	10,558
Copper in ore smelted, per cent.	7.45	6.33	6.04	5.77

The directors' report says: "The output at the mine was less than in the previous year owing to a short strike of the miners last October, to a fire in the mine in November, and also because the gradual introduction of more rapid processes for dealing with the ore has rendered it less necessary to accumulate large stocks, in advance of consumption at the smelters. The quantity of ore smelted has been considerably increased, but the copper produced has been less, in proportion, than last year, because more fines were used and the particular heaps of calcined ore worked contained a slightly lower percentage of copper. The production and sales of copper have considerably increased, but the profit is less than last year by about £30,000, owing to the price obtained for it having been rather lower, and to the heavy extra cost of labor, fuel, raw materials, taxation, etc.

"The exploration of the company's property has been steadily proceeded with, but no discoveries of ascertained importance have been made. About one-half of the property still remains to be explored. An investigation of the present mass has lately been made by an independent mining engineer, and it is estimated that—including the stocks on the surface and in process—about 1,000,000 tons of ore, likely to average about the same value as that already dealt with, still remain in sight. An option is held upon a neighboring property, and a great deal of exploratory work has been done upon it during the year, though, owing to a dispute with the owners, operations on it have been temporarily suspended. The expenditure incurred on another property referred to at the last annual meeting has proved fruitless and has therefore been written off in the profit and loss account."

RECENT DECISIONS AFFECTING THE MINING INDUSTRIES.

Specially Reported for the Engineering and Mining Journal.

DUTY ON ASBESTOS.—Asbestos fiber, which has been separated from asbestos rock by mechanical processes and which contains portions of the non-fibrous rock, is not dutiable as a manufacture of asbestos, but is entitled to free entry as "asbestos, unmanufactured," under paragraph 484, act of July 24th, 1897.—Appeal of Central Vermont Railway Company from Collector of Customs at Burlington, Vt.; Board of General Appraisers.

DUTY ON COLD-ROLLED STEEL PLATES.—Steel or iron sheets or plates valued at more than 3c. per pound are dutiable according to value under the provisions of paragraph 135, act of July 24th, 1897. The provisions of paragraph 133 do not apply to articles dutiable under said paragraph 135, but are limited to such sheets or plates as are provided for by gauge. Paragraph 133 fixes a specific rate and must be read as part of paragraph 131.—Appeal of J. W. Beam from Collector of Customs at San Francisco; Board of General Appraisers.

WHEN COAL COMPANY IS NOT LIABLE FOR ACT OF AGENT.—A coal-mining company employed an agent to sell all the coal mined by it, and agreed to furnish him an office in a certain city and pay him a monthly salary. The agent contracted in the name of the company with a coal dealer to furnish an amount of coal for 10 months which was in excess of the output of the company. It was held that the contract was not binding on the company, since the agent had no authority to sell the future product of the mine.—Blackmer vs. Summit Coal and Mining Company (58 Northeastern Reporter, 289); Supreme Court of Illinois.

LIABILITY OF MINE OWNER FOR DEFECTIVE ELECTRIC WIRES.—Where the miners of a coal mine, with the knowledge and implied consent of the owner, are accustomed to use the passage or entries in the mine as a place for congregating or passing to and fro during the hours of recreation, it is negligence in the owner to introduce and extend along such entry an electric wire which is dangerous to the life of those who come in contact with same, without properly insulating or inclosing it, or giving notice of the danger to those who, he should reasonably apprehend, are likely to be brought into contact with it, and such negligence will render him liable for the death of a miner who, in the accustomed use of the premises, and without knowledge of the danger or negligence on his part, is killed by coming in contact with such wire.

But a coal miner, who during the noon hour, while not engaged in his work, goes to a different part of the mine for the purpose of visiting another miner, is not while so absent engaged in the line of his duty, so as to impose on the employer the duty of a master to see that the entry through which he passes from and to the part of the mine where he is employed is kept in a safe condition for his passage.—Ellsworth vs. Metheney (104 Federal Reporter, 119); Circuit Court of Appeals of United States for Ohio.

PIG IRON PRODUCTION IN GREAT BRITAIN.

The returns collected by the British Iron Trade Association for the year 1900 are now complete, and give the output of pig iron as follows, in comparison with that for 1899, the figures being in long tons:

	—1899.—		—1900.—		Changes,
	Tons.	Per ct.	Tons.	Per ct.	Tons.
Forge and foundry iron	4,258,956	45.8	4,108,350	46.1	D. 150,606
Bessemer pig	3,990,282	42.9	3,636,839	40.8	D. 353,443
Basic pig	860,672	9.2	924,987	10.4	I. 64,315
Spelgeleisen and ferro-manganese	195,409	2.1	238,394	2.7	I. 42,985
Totals	9,305,319	100.0	8,908,570	100.0	D. 396,749

The special features of this statement are the relatively large decrease in Bessemer pig and the actual increase in basic pig iron. It will be noted also that the decrease in foundry and forge iron was comparatively small.

The production by districts is given as below:

	1899.	1900.	Changes.	Per ct.
Scotland	1,166,838	1,153,896	D. 12,942	1.1
Durham	1,040,926	975,627	D. 65,299	6.2
Cleveland	2,110,557	2,094,887	D. 15,670	0.7
West Cumberland	918,210	891,190	D. 27,020	2.9
Lancashire	730,262	725,817	D. 4,445	0.6
South Wales	942,975	858,450	D. 84,525	9.0
Other districts	2,395,551	2,208,703	D. 186,848	8.5
Totals	9,305,319	8,908,570	D. 396,749	4.3

The reduction in activity was most marked in South Wales, and in the minor districts. The Cleveland District, Scotland and West Cumberland showed only unimportant changes.

The stocks of pig iron in makers' hands and in public stores at the close of the year were the smallest reported for a long time, the total being only 456,419 tons. The decrease in stocks during the year was 277,570 tons, which would give, added to the production, a total of 9,186,140 tons as the approximate consumption for the year. This compares with a similar total of 9,516,637 tons for 1899.

The production of iron ore in Great Britain in 1900 was reported at 9,531,450 long tons, while the imports were 6,297,873 tons. Assuming that there was no large accumulation of stocks, the total of 15,829,323 tons would represent the approximate consumption of ore, being 1.77 tons to the ton of pig iron. This, however, makes no allowance for the pyrites, residues or "purple ore," of which a considerable quantity is used in Great Britain.

THE DURKEE "LIGHTNING" ELECTRIC DRILL.

THE DURKEE ELECTRIC DRILL.

Ever since the first introduction of electric transmission of power into mining operations a great deal of study and experiment has been devoted to the design of electric drills. Electric motors are now used to operate pumps, hoists and coal cutting machines; for haulage and for almost all purposes required in mining. With drills the results have been varied, as the difficulties attending their design have not always been clearly understood or appreciated by inventors.

The accompanying illustration shows a new form of electric drill, the design of which is the result of much study and experience, and which seems to have met the objections made to many of its predecessors. This machine is brought forward by the Mine and Smelter Supply Company, of Denver, Colo., and has been named the "Durkee Lightning" drill. Its general form and design are shown in the accompanying engraving. The Durkee drill is operated by a small electric motor through a short flexible shaft, and uses but 1¼ H. P. at the motor to do the work of a 2½-in. drill. The Durkee drill follows as far as possible the best practice as established by the air drill, using the same style of column, arm, clamp, guide shell and feeding device, chuck and rotating devices. The method of application of the power to the bit is, of necessity, entirely different from the air drill. The rotary motion of the motor is transmitted through a flexible shaft to a crank shaft in the drill, which oscillates a heavy bell crank in such a manner that the piston rod carrying the bit is given a quick motion toward the rock, while the return stroke is much slower and of increased power. This gives a sharp blow to the rock and a strong pull to release the drill from a rifled hole. The power is delivered to the piston rod through buffer springs, which springs, however, are not required to deliver the blow by their expansion. Careful attention has been paid to simplicity and ease of repair, and as a result any part can be taken out and replaced in a few minutes without removing the drill from the column.

The Mine and Smelter Supply Company, as agent for the Durkee drill, has spent several months in carefully testing it in actual mine work and has found that the results are very satisfactory. The drills are now running in mines in Colorado, Utah, Arizona, Idaho and other States, and in all cases the reports are most favorable. All users concur in saying that the Durkee drill is effective and easy to run as the air drill, while the power required is very small.

A PROTECTION AGAINST MINE GASES.

The proper equipment for the successful operation of a mine should include a variety of appliances for use in case of accident. Most important among these is some form of protection which will enable men to enter mine workings when the air, from an explosion, fire, or some like cause, is dangerous to human life; though it may be necessary to make the attempt to save life or protect property. Much is involved in the construction of such an article, as every contingency that might arise must be prepared for, and every miner knows what varied elements may enter into the question of protection.

THE VAJEN-BADER PROTECTIVE HELMET.

In assuming a protection designed for this purpose, it must be felt that safety is assured and no incumbrance offered, that the workings of the natural organs are not in the least suppressed, the wearers being able to see, hear, breath cool fresh air, etc., while there is nothing to divert the attention from accomplishing the ends in view. Lightness in weight must also be a paramount requisite, together with the ability to withstand fire, explosions, etc., and also dangers arising from falling debris.

Mine operators can readily appreciate the advantage of having a device that will assist in protecting their mines as well as their men and in rescuing disabled workers. The miners themselves should feel that there is an opportunity of saving their lives in case of accident and of putting out fires in mines where heretofore it was necessary to flood the entire mine in order to extinguish the fire. The delay in entering mines after the many accidents, which come when least expected, has resulted in great loss of property as well as of human lives.

The illustration herewith is of a head protector, showing the interior of same. Many who have used this device assert that they would not dispense with them under any consideration, and report many demonstrations of their efficacy.

These helmets have been adopted in various departments by the Governments of the United States, Great Britain and Russia, and they can be found in all parts of the world. They are distributed among the best known concerns everywhere, who are authority on all matters pertaining to the advancement of the mining industry.

These helmets are manufactured by the Vajen-Bader Company of Indianapolis, Ind., and are the result of long study and experiment. The merits of the device are fully established, and it has aided in an large saving of life and property.

MINERAL COLLECTORS' AND PROSPECTORS' COLUMN.

(We shall be pleased to receive specimens of ores and minerals, and to describe and classify them, as far as possible. We shall be pleased to receive descriptions of minerals, and correspondence relating to them. Photographs of unusual specimens, crystals, nuggets and the like, will be reproduced whenever possible. Specimens should be of moderate size, and should be sent prepaid. We cannot undertake to return them. If analyses are wanted, we will turn specimens over to a competent assayer, should our correspondent instruct us to do so, and send the necessary money.—Editor E. & M. J.)

327.—X. S.—Samples are too small. Please send larger pieces.

328.—C. O. N.—No. 1, the dark-red crystals, are garnets; No. 2, the soft white mineral, is apparently a hydrous silicate, may be pyrophyllite.

329.—Talc.—E. J. B.—The sample is not talc of the best quality and has not much value. First grade North Carolina talc sells for $13.75 per ton at New York. Second grade material brings but $10 and the market for it is limited.

330.—Minerals of the Chicago Area.—At a recent meeting of the Science Club of Northwestern University, Prof. A. R. Cook addressed the club on this subject. Thus far 48 minerals have been found in the area and studied. One-fourth of them occur in the underlying Niagara limestone, and are most important since they most properly represent this region. They are sulphur, galena, sphalerite, pyrite, marcasite, quartz, limonite, calcite, dolomite, siderite, melanterite, petroleum, gas, asphalt.

The sulphur occurs in crumbling rounded masses in the center of the decomposing marcasite. Galena and sphalerite are in crystalline masses with occasional crystal planes developed showing characteristic cleavage, and contained both in limestone and in quartz. Pyrite is most common when the containing limestone most nearly approaches the purity of calcite. The surprising condition is the great abundance of the orthorhombic form of the iron sulphide. Pyrite is rare, but marcasite occurs in extensive beds, where it has been sorted out by hydraulic action as in the Des Plaines Valley or on the lake shore. A bed several feet wide extended along the water's edge for 200 ft. where the lake was encroaching upon the shore. The marcasite soon disappears upon exposure.

Quartz occurs in abundance in both phenocrystalline and cryptocrystalline varieties. Good scalenohedrons of calcite are found at Stony Island imbedded in asphalt. The asphalt and maltha which are usually disseminated through the Niagara limestone of the region occur quite pure in cavities formed by the dissolution of fossil coelenterates, echinoderms and mollusks in the strata at Stony Island.

QUESTIONS AND ANSWERS.

(Queries should relate to matters within our special province, such as mining, metallurgy, chemistry, geology, etc.; preference will be given to topics which seem to be of interest to others besides the inquirer. We cannot give professional advice, which should be obtained from a consulting expert. Nor can we give advice about mining companies or mining stock. Brief replies to questions will be welcomed from correspondents. While names will not be published, all inquirers must send their names and addresses. Preference will, of course, always be given to questions submitted by subscribers.—Editor E. & M. J.)

Speiss.—Can you tell me what the term "speiss," as used by copper smelters, means exactly?—C. U.

Answer.—Peters—"Modern Copper Smelting," page 231—says: "Speiss, as ordinarily understood, is a basic arsenide, or antimonide of iron, often with nickel, cobalt, lead, bismuth, copper, etc., having a metallic luster, high specific gravity, and a strong tendency toward crystallization. It takes up gold with avidity, but has a less affinity for silver than copper matte has."

Silver-Lead Zinc Ores.—Can you suggest a method of treatment or publish in your questions' columns information regarding the possibilities of treating an ore analyzing as follows: Silver, 14 oz. per ton; lead, 32 per cent. as galena; copper, 2.6 per cent. as chalcopyrite; zinc, 26 per cent. as blende; sulphur, 20 per cent.; silica, 7 per cent.; iron, 10 per cent. as pyrites; lime, trace; no metallic oxides?—J. P. T.

Answer.—We cannot undertake to give directions in this column for treating special ores. You should submit your case to a competent metallurgist for consideration.

Reward for Treating Arizona Copper Ores.—I understand that there is a mining company in Arizona which is offering a bonus of $1,000,000 in stock or cash to any one who will treat their ore and make them successful as a mining company. Kindly inform me through the medium of your journal what you know about the matter, and as to whether the offer is bona fide.—A. R.

Answer.—We do not know of any such offer as you refer to, and do not believe that it has been made, or that it would be made, in good faith. A mining company having refractory ores to treat would not go to work in that way, but would engage the services of competent metallurgists. A wild-cat concern might make such an offer to attract attention to its stock, but not in good faith. Your informant has probably been misled by some irresponsible newspaper paragraph.

Metals of the Thorium Group.—I have discovered in this section of country the following rare elements—cerium, didymium, lanthanum, thorium and iridium—and am anxious to find a market for any or all of them. Will you kindly inform me through your "Journal" the extent of the market and the value of these elements? Can you give any information as to the process of separating these elements on a large scale?—T. W. W.

Answer.—The oxides of the rare metals of the thorium group are used for making incandescent mantles for gas lights under the Welsbach and other patents. The market for them is practically limited to the quantity employed for that purpose. Heretofore the supply has been derived from the mineral known as monazite, which is found in North Carolina and in Brazil, most of that used coming from the last-named country. Unless you can furnish the material more cheaply than the Brazilian monazite is now sold, there will be no market for it. As to the extent of the demand, the business employing the material is controlled by a few parties, and exact statistics are not to be had. The process of reducing the ores is a complicated one, too long for description here. The Welsbach Light Company, of New York, is the chief purchaser.

Consult "The Mineral Industry," Volumes VI., VII. and VIII.

PIG IRON PRODUCTION IN GERMANY.—The output of the German blast furnaces in February was 624,208 metric tons of pig iron, being 51,004 tons less than in January and 4,399 tons less than in February, 1900. For the two months ending February 28th the production was, in metric tons:

	—1900.—		—1901.—		Changes,
	Tons.	Per ct.	Tons.	Per ct.	Tons.
Foundry iron	233,990	18.3	254,895	19.3	I. 20,905
Forge iron	261,192	20.4	258,323	19.6	D. 2,869
Bessemer pig	71,869	5.6	76,463	5.8	I. 4,594
Thomas (basic) pig	712,168	55.7	729,739	55.3	I. 17,571
Totals	1,279,219	100.0	1,319,420	100.0	I. 40,201

The total increase was 3.1 per cent. The changes are not important, though the increases in foundry iron and Bessemer pig are unusual.

STRETCHING THE EAST RIVER BRIDGE CABLE.—On April 7th the John A. Roebling's Sons Company took the first important step in the making and laying of the cables for the New East River Bridge at New York. The contract was awarded to the company several months ago and the preparation of plans and other preliminary work, as well as the main part of the contract, which is to follow, is under the supervision of Mr. Charles G. Roebling, the president of the company, who is assisted by Mr. William Hildenbrand. The work done was the placing in position of the 2¼-in. diameter ropes which support the temporary foot bridge on which the workmen will stand during the main work of cable laying. Several methods of getting the first line across have been employed in the past, and kites, swimmers and other agents have been tried, but that employed on this occasion has, we believe, never been before, and is a distinct advance over all previous ones. The method adopted was to carry the drum containing the cable across the river on a float (one end having been previously secured) and pay out the cable, allowing it to rest on the river bed until at the proper time it could be raised from the water and to the desired height by means of a stationary engine and drum. The first cable was successfully raised on April 11th, the time required being only 7 minutes. Navigation was, of course, suspended during that period.

PATENTS RELATING TO MINING AND METALLURGY.

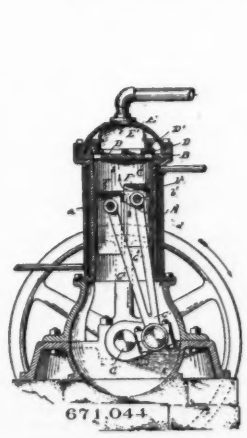
UNITED STATES.

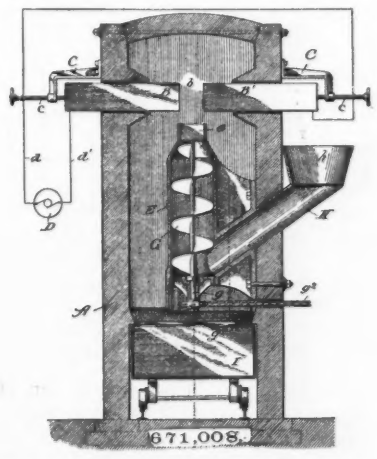
The following is a list of the patents relating to mining and metallurgy and kindred subjects, issued by the United States Patent Office. A copy of the specifications of any of these will be mailed by the Scientific Publishing Company upon receipt of 25 cents.

Week Ending April 2d, 1901.

670,960. DOUBLE-HOPPER-BOTTOM CAR. George I. King, Detroit, Mich., assignor to the American Car & Foundry Company, St. Louis, Mo. The combination with a body portion having inclined floor sheets at its ends, a cross-ridge arranged in the center of the car, hinge lugs at the edges of said cross-ridge, and said inclined floor sheets, and doors mounted in said lugs.

671,008. APPARATUS FOR PRODUCING CALCIUM CARBIDE. John Zimmerman and Isedore S. Prenner, Chicago, Ill. The combination of a furnace chamber, electrodes arranged in the chamber transversely thereof, a vertical feed duct or chamber located within the furnace chamber and having its mouth or discharge in line with and below the arcing space of the electrodes, and mechanism for compressing a mixture of carbon and lime directly in the feed duct or chamber and within the furnace chamber, and feeding the mixture upwardly into the arcing space.


671,044.


671,008.

671,025. UNLOADING APPARATUS. Charles P. Martin, Lemont Furnace, Pa., assignor of five-eighths to Lane Martin, same place, and Charles H. Rhodes, Haydentown, Pa. The combination of a tilting track section with a turntable and axletree, upwardly curved rails, a car truck carrying said turntable, braces connecting the side rails of said track section, a rod carrying abutments engaging with the rear wheels of an ore car upon said track section, a

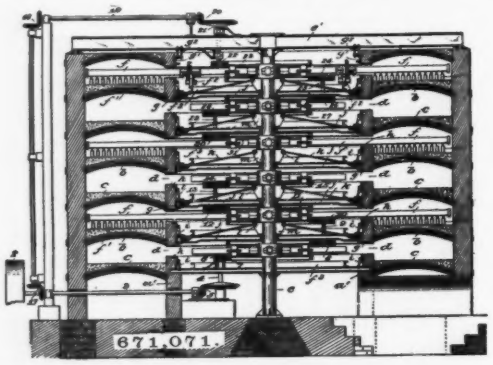
hook attached to the rear of the track section and engaging with the catch.

671,037 and 671,038. PROCESS OF AND MACHINE FOR MANUFACTURING CHAINS FROM CROSS IRON. Friedrich W. Wesner, Charlottenburg, Germany. A machine comprising dies for forming the link blanks, dies for punching the webs left in such blanks, means for tilting the successive links, means for cutting the intervening attaching portions.

671,044. AIR COMPRESSOR. George S. Binckley, San Francisco, Cal., assignor of one-half to Willis G. Dodd, same place. The combination with the compressing cylinder, of a piston working therein, said piston consisting of relatively movable sections, a drive-shaft for imparting reciprocating motion to the piston, and of a single connecting-rod connection between the drive-shaft and piston having separate pivoted connections with the respective sections, the movement of the piston sections being dependent upon the angularity of the connecting-rod connection during the revolution of the drive-shaft.

671,069. QUICKSILVER RECEIVER. Fritz Kaeferle, Hanover, Germany. In combination, a chamber in indirect communication with the atmosphere and provided with an entrance for quicksilver and fluid, a second chamber in connection therewith, an accumulation chamber having holes in the wall thereof for admitting quicksilver from the said second chamber, and provided with an orifice for its return to the first-mentioned chamber, and means for closing said orifice.

671,071. ORE-ROASTING FURNACE. Richard F. Pearce, Butte, Mont., assignor to the Pearce Furnace Company, Denver, Colo. In an ore-roasting furnace, the combination with an outer solid wall and


671,071.

an inner horizontally-slotted wall, of a column spaced apart from the inner wall, and a cantilever support for the portion of the inner wall above the slot, comprising a trussed chord projecting from the column and connected with the said inner wall.

671,078. DISTILLATION OF PETROLEUM. John T. Davis, San Francisco, Cal. The process of producing a residuum suitable for use in a binder for artificial fuel, which consists in distilling crude petroleum to a temperature approximating to, but below 660° F., and continuing the distillation at such temperature until the residuum has reached the required condition.

671,081. APPARATUS FOR MAKING GELATIN DYNAMITE. Elmer E. Green, Santa Clara, Cal. An apparatus comprising a rotary platform, tanks mounted thereon, kettles within said tanks, vertically-adjustable stirrers designed to be lowered into said kettles, and means for operating the stirrers.

671,084. ELECTRIC WELDING APPARATUS. Henry F. A. Kleinschmidt, Johnstown, Pa., and Frederick A. Phelps, Jr., Newark, N. J., assignors to the Lorain Steel Company, of Pennsylvania. The combination with contacts arranged to bear against opposite sides of the parts to be welded, of means for actuating said contacts to shift their points of engagement with said parts with respect to the center lines thereof.

671,090. PUMP. John S. Morton, Oakland, Cal. A series of helical runners secured upon a rotatable shaft in combination with a substantially similar series of reversely-formed helical runners, each element of each series being separated from its adjacent element and being provided with a plate upon one of its faces of less than its own diameter, but larger than that of the hub, and means adapted to prevent the rotation of the fluid between the adjacent elements of each series of runners.

671,116. CONCENTRATOR. Elihu G. Neighbor, Ogden, Utah. The combination of a tank having a trough-shaped bottom, a screw conveyor in said trough, a revoluble screen partly immersed in said tank, means for changing the end of said screen located at the end of said tank, an endless carrier under said screen traveling toward the receiving end, a shaking screen table under said carrier, inclined toward the rear of the tank, an endless elevator carrier having its lower end under the shaking table and upwardly and rearwardly inclined out of said tank, means for operating said parts in time movements, and means for injecting a current of water into said tank from the rear end toward and against the material operated upon by the screen, table and carrier, the greatest impact being against the carrier, the flow of the water being in a direction the reverse to the direction in which the material is discharged.

671,134. HOISTING BUCKET. William Hasz, Milwaukee, Wis. A hoisting bucket comprising a non-separable shell provided with vertical guides, rack bars having limited play along the guides, separable bucket sections hinged to the shell and linked to the rack bars, a spindle carried by the aforesaid shell, pinions on the spindle engaging said rack bars, and a pulley in union with said spindle to engage with a loop of a suspending cable.

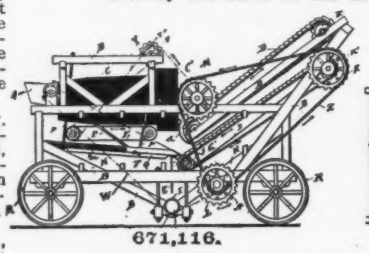
671,135. SULPHONIC-ACID SALT AND PROCESS OF MAKING SAME. Ludwig O. Helmers, Hamburg, Germany, assignor to Ichthyol Gesellschaft, Cordes, Hermanni & Co. The process of producing sulphonic acids, forming permanent metallic salts soluble in water, which consists in neutralizing the sulphonized compound obtained by the action of sulphuric acid on sulphureted hydrocarbons with a suitable metallic base, filtering off the liquid from the insoluble salts, oxidizing the filtered solution, setting free the sulphonic acid by precipitating the base, and evaporating the filtrate to dryness.

671,161. APPARATUS FOR AERATING AND FEEDING POWDERED COAL. Albert A. Day, Brooklyn, N. Y., assignor to the Ideal Fuel-Feeder Company, same place. The combination with an ejecting chamber, provided with ejecting mechanism, of a separate aerating chamber communicating with said ejecting chamber, a series of revolving aerating blades, located in the aerating chamber, and a positive feeding mechanism.

671,209. COMPRESSED-AIR PUMP. Ralph W. Elliott, Oakley, Cal., assignor of one-half to Frank P. Baker, same place. The combination of a liquid receptacle, a check valve for admitting liquid thereto, a pipe for conducting liquid from said vessel, said pipe opening near the bottom thereof, a compressed-air induction pipe leading to said vessel and opening thereinto at the upper end.

671,268. DISCHARGING DEVICE FOR ENDLESS CONVEYORS. James M. Dodge, Philadelphia, Pa., assignor to the Link Belt Engineering Company, same place. The combination of an endless bucket conveyor, a frame, a wheel mounted on the frame over which the conveyor passes to discharge its load, and means for locking the said frame to the conveyor.

671,276. ORE CONCENTRATOR. Arthur J. Fritsch, St. Louis. An ore concentrator, comprising a base, standard frames supported above it, cams under certain of said frames for raising and lowering them, a lever for operating said sams, a lock for retaining the lever and thereby the cams in the adjustment in which they are placed, a


671,116.

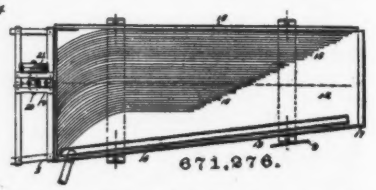
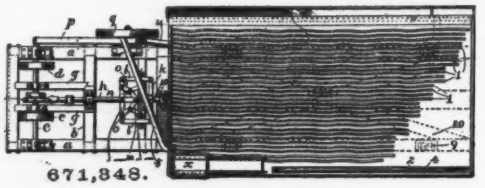

671,276.

table supported to swing between the said frames, means for passing the material on to the said table in a thin stream, a series of curved and tapering guides for regulating the movement of the ore, an operating shaft, means operated by the shaft for forcing the table rearwardly whenever it is rotated, and a separate means for drawing the table to the front.

671,315. CONVEYOR. Thomas A. Edison, Llewellyn Park, N. J. In a bucket conveyor, the combination with two sets of endless ropes each composed of a plurality of ropes, of buckets swung between the sets of ropes, clamps upon the ropes, and smooth driving pulleys upon which the clamps ride.

671,316. APPARATUS FOR SCREENING OR RESCREENING FINE MATERIALS. Thomas A. Edison, Llewellyn Park, N. J. A screening apparatus comprising in combination a fine screen through which the fine particles desired may pass, a coarser screen to which the tailings of the fine screen are directed and through which the rest of the fine particles may pass; conveying devices for receiving at the bottom of the coarse screen a substantially uniform bulk of coarse particles too large to be affected by either screen and for directing the coarse particles to the top of the fine screen; means for adding to the coarse particles a smaller portion of fine material, and means for separately withdrawing the screenings of both screens.

671,348. ORE CONCENTRATOR. John H. Michelsen, Butte, Mont., assignor of one-half to Miller La Mothe Borglum, same place. The combination with a main frame, a vibratory table mounted thereon, means carried by said frame for adjusting the height of one side of said table, and means for delivering the material upon said


671,848.

table; of a main driving shaft, a pitman connected to and adapted to be operated from said main shaft, a connecting rod connected to said table, a frame secured to said connecting rod, compound toggles mounted in said frame, one pair of said toggles forming a connection between said frame and the main frame, and a toggle forming a connection between said pitman and the above-mentioned toggles.

671,389. METHOD OF TREATING ORES. Morris Seligsohn, Denver, Colo., assignor to the International Metal Extraction Company, of Colorado. The process of amalgamation consisting in introducing into the ore-pulp air impregnated with two or more chemicals adapted by their mutual reaction to promote amalgamation, and prevent the sickening of the mercury. The chemicals used are ammoniated air, bromine and chlorine gas.

671,425. HOISTING APPARATUS. Almon E. Norris, Cambridge, Mass. In a hoisting apparatus, a shaft, a friction drum loosely mounted thereon, a clutch member fixed to said shaft, a fixed non-rotating abutment, and thrust device concentric with the shaft between the abutment and the friction drum, said thrust device including a split and separable thrust member and co-operating cam surfaces, one of which is rigid with the abutment, and means to turn the other cam surface about the shaft, whereby the drum is moved longitudinally to cause its engagement with the clutch member, the split thrust member when removed from the shaft permitting the separation of the friction drum and the clutch member without taking the shaft from the bearings.

GREAT BRITAIN.

The following is a list of patents published by the British Patent Office on subjects connected with mining and metallurgy.

Week Ending March 2d, 1901.

2,774 of 1900. WHITE LEAD TREATMENT. G. Bischof, London. Method of making white-lead oil paste without first drying the white lead.

2,783 of 1900. ELECTRIC SMELTING FURNACE. Deutsche Gold und Silber Scheideanstalt, Frankfort, Germany. A large electric smelting furnace with a number of electrodes instead of one.

2,917 of 1900. COKE MAKING. P. Naef, New York, U. S. A. Various improvements in the inventor's process for making coke and recovering the gases and other by-products.

4,712 of 1900. METALLIC CHLORIDE PRODUCTION. J. Hargreaves, Widnes. Utilizing chloride of iron for producing oxides of iron and the chlorides of other metals.

7,028 of 1900. UTILIZING SPENT PYRITES. K. Kellner, Vienna, Austria. Utilizing spent pyrites containing other metals, such as antimony and zinc, by treating with sulphurous acid, then oxidizing to sulphate, and then making a chloride, and electrolyzing.

17,027 of 1900. ELECTRIC FURNACE. G. F. Westman, New York, U. S. A. An improved form of electric furnace specially suitable for smelting arsenical gold ores.

21,149 of 1900. ELECTROLYTIC PROCESS. J. Meurant, Liege, Belgium. Special electrolytic baths for depositing metals and alloys, with easily defined resistance.

23,477 of 1900. ROASTING ORES. E. C. Pohle and S. Croasdaile, Denver, U. S. A. Improvements in the process of chloridizing-roasting refractory ores for the recovery of gold and silver.

PERSONAL.

Mr. John Fillius has returned to Shasta County, Cal., from a business trip to Boston, Mass.

Mr. John L. Scarlett, of London, Eng., has been examining property in West Fisher, Mont.

Mr. N. F. Leopold, of Chicago, is looking after his interests at the Arcadian Mine, Michigan.

Mr. Wm. A. Church, of New York, has been inspecting the Shannon Mine, near Safford, Ariz.

Mr. H. J. Sears left Central City, Colo., recently for a trip to Eastern cities on mining business.

Mr. G. B. Earnshaw has resigned as superintendent of the Shawmut Mining and Milling Company, at Bingham, Utah.

Mr. Philip Argall, consulting mining engineer and metallurgist of Denver, Colo., left Denver April 12th for a 3 months' trip to Europe.

Mr. Albert Verastegue, manager of the export department of the Babcock & Wilcox Company, of New York City, has returned from a trip to Cuba.

Mr. Charles L. Butters is now at his old home at Kennet, Shasta County, Cal., looking after mining interests, and the Backbone Ditch, which he owns.

Mr. J. L. Greatsinger, president of the Duluth & Iron Range Road and of the Minnesota Iron Company, has not resigned and will not till the annual meeting.

Mr. Joseph J. Beck, formerly assistant superintendent at the Falcon Iron and Nail Company mill at Niles, O., has been appointed manager of all the Niles plants of the American Sheet Steel Company.

Mr. D. A. Conolly, who has been assistant superintendent of smelters with the Mountain Copper Company at Keswick, Cal., has accepted a position with the Northport Mining and Smelting Company at Northport, Wash.

Mr. Samuel R. Morgan, who has become inside superintendent of the Delaware & Hudson collieries about Wilkes-Barre, Pa., has resigned from the Lehigh & Wilkes-Barre Company. He had been with the Lehigh & Wilkes-Barre Company for 30 years.

Mr. F. J. Peck, of Crowell & Peck, mining engineers and chemists, Cleveland, O., has just returned from a trip to the Gogebic and Marquette Iron Ranges, Mich., after examining a number of iron mines. Mr. B. Crowell, of the same firm, is now in Indian Territory looking over properties for Cleveland men.

Mr. F. H. Richards succeeds Mr. C. L. Vawter as United States marshal of the second division of Alaska. His jurisdiction will extend over Northwestern Alaska, taking in Dutch Harbor, Unalaska, the Kuskokwim and from the headwaters of the latter river to the Arctic, including the Koyokuk. His official headquarters will be at St. Michael, but he will spend most of his time in Nome.

Mr. D. H. Bacon, chairman of the board of directors of the Tennessee Coal, Iron and Railroad Company, has been in the Birmingham District, Ala., during the last 2 weeks and is making changes in the management of the concern. Mr. Ball, of Duluth, Minn., will be in charge of the ore mining department after May 1st. Mr. Bacon's hand has been felt most keenly in the immediate neighborhood of the company's properties.

Mr. Arthur Keen, of Guest, Keen & Company, Limited, iron and steel manufacturers, and Mr. E. Windsor Richards, one of the directors of the same company, which carries on extensive works at Dowlais, Cardiff, Newport (South Wales), and Birmingham, England, are in this country to ascertain what may be the probable outcome of the formation of the United States Steel Corporation and what effect it will have on the iron and steel trades of Great Britain.

Mr. Lewis E. Aubury, of Los Angeles, has been appointed State Mineralogist of California by Governor Gage, to take the place of Mr. A. S. Cooper, whose term of office has expired. Mr. Aubury was born in Placer County in 1862. He is 2d vice-president of the California Miners' Association and manager of the Western Extraction Mining Company of Pichacho, San Diego County, where he is operating a cyanide plant. Mr. Aubury's first mining work was with the Standard Consolidated Mining Company at Bodie in 1879, but in 1880 he went to Tombstone, Ariz., where for several years he was general manager and superintendent of the Mayflower Mining Company. He has also done more or less mining work in Mexico, Arizona and New Mexico, and for several years past has been developing gold mines in Mariposa County, Cal., as well as conducting cyanide plants in Southern California, Arizona and New Mexico. Mr. Aubury is consulting engineer for several mining companies and has been employed in examining mining properties.

OBITUARY.

Prof. Henry A. Rowland, of Johns Hopkins University, one of the most noted physicists of the country, died April 16th in Baltimore, Md. His numerous inventions, including the multiplex telegraph instrument and the machine for making diffraction gratings, brought him great renown. He was born in Honesdale, Pa., on November 27th, 1848. He was graduated at the Rensselaer Polytechnic Institute in 1870 as a civil engineer and spent some time in a railway engineering corps. In 1875 he went abroad and spent a year studying under Helmholtz in Berlin and examining physical laboratories on the Continent. Shortly after his return to this country in 1876 he was invited to accept the chair of physics, including charge of the laboratories of the Johns Hopkins University, and has ever since held that place. As a consulting engineer he had been engaged in directing many great works, including the development of the water power of Niagara Falls to produce electricity. He was a member of the Electrical Congress, which met in Paris during the exposition of 1881, and for this work on the jury of the electrical exhibition he was made a Chevalier of the Legion of Honor of France. He was a member of the international commission for establishing electrical units. He presided over the section of physics of the American Association for the Advancement of Science on several occasions, and he received from the American Academy of Arts and Sciences in 1884 the Rumford medal for his researches as to light and heat. He is survived by a widow.

SOCIETIES AND TECHNICAL SCHOOLS.

University of California.—About 30 students of the mining college of the University, under the supervision of Professor Lawson, are making study of the geological formation and mining methods along the Mother Lode in Cal.

International Mining Congress.—Secretary Irwin Mahon, of Boise, has issued the call for the fourth annual session of the congress, to be held in Boise on July 23d, 24th and 25th. The basis of representation gives each State and Territory 30 delegates, each county 5, each city and town 5, and one additional for each 1,000 people; each mining exchange, real-estate exchange, chamber of commerce, board of trade, miners' union, and trade and labor union and other commercial bodies 5.

Iron and Steel Institute.—Andrew Carnegie has founded a research scholarship in connection with this English society by presenting it with $32,000 worth of Pittsburg, Bessemer & Lake Erie Railroad 5% debenture bonds, the interest from which is to be applied in awarding annually one or more scholarships of such value as the council of the Institute shall decide. The awards will be made irrespective of sex or nationality. The scholarships will be tenable for a year, and will be renewable at the discretion of the council. The object of the scheme is to enable trained students to conduct research work in the metallurgy of iron and steel and allied subjects.

Columbia University.—The honorary lectures in metallurgy for the coming year are:

James Douglas, president of the Copper Queen Consolidated Mining Company, "Bessemerized Copper Ores and Mattes;" H. O. Hofman, professor of metallurgy, Massachusetts Institute of Technology, "Desilverized Lead;" Jos. W. Richards, professor of metallurgy, Lehigh University, "Aluminum;" Geo. C. Stone, superintendent of the New Jersey Zinc and Iron Company, "Zinc;" W. B. Devereux, "Review of the Progress of Silver-Lead Smelting in the Past Twenty Years;" Richard Moldenke, "The Modern Foundry;" Edward D. Peters, Jr., author of "Modern Copper Smelting," "Establishment of Metallurgical Plants in New Districts;" Joseph Struthers, assistant editor of the "Mineral Industry," "The Cyanide Process;" H. F. J. Porter, engineer of the Bethlehem Steel Company, Bethlehem, Pa.

Engineers' Club of Philadelphia.—At the meeting on April 6th 71 members and visitors were present. Mr. Henry G. Morris presented the first paper of the evening on a "New Type of Water-Tube Boiler" invented by Mr. John C. Parker, in which the chief feature of novelty consists in an arrangement whereby the circulation is in the opposite direction to that usually employed in boilers of this class. The details of its design and construction were fully explained and illustrated by a series of drawings reproduced in the electric lantern and by a small working model. Mr. Morris was followed by the inventor, who made some remarks upon the theory and practice in designing boilers of the water-tube type, and answered some questions propounded by Mr. James Christie in a discussion which followed.

Dr A. E Kennelly presented the second communication, in which, by the aid of lantern illustrations, he described the composition of electric cables for deep-sea and shore lines, the methods of carrying and laying the cables from on board ship, the location and general arrangement of cable stations and the method of sending messages from them, and the difficulties in locating and repairing breaks in the line.

Messrs. Thos. Welcome Clark, Chas. Dunn, Geo. W. Hancock, Leonard C. Holston, H. W. Huntzinger, Harry W. Jayne and Thos. McE. Vickers were elected to active membership, and Mr. Henry F. Dirks to junior membership.

American Chemical Society.—The sessions for the celebration of the 25th anniversary of the society began April 12th at the Chemists' Club in New York City. Addresses of welcome were made by Dr. C. A. Doremus, president of the New York Section, and President T. J. Parker, of the Chemists' Club. A fitting response was made by President F. W. Clarke, of the American Chemical Society. The following papers and reports were then read: "Chemical Societies of the Nineteenth Century," H. Carrington Bolton; "Organization and Development of the Chemical Section of the American Association for the Advancement of Science," Marcus Benjamin; "Progress in Organic Chemistry During the Past Twenty-five Years," W. A. Noyes; "Progress in Opportunities for Advanced Inorganic Work," L. M. Dennis; "Aims and Opportunities Offered in Physical Chemistry in America," Louis Kahlenberg; "Improved Teaching in Technical Chemistry, and Results Accomplished by the Application of Chemistry to the Arts, in America, Since the Founding of the American Chemical Society," Chas. E. Munroe; "Progress of Teaching Chemistry in the Schools Since the Founding of the American Chemical Society," Rufus P. Williams; "Report of the Work of the Census Committee," Charles Baskerville, chairman.

In the evening addresses were made by H. W. Wiley on "The Dignity of Chemistry," and by C. F. Chandler on "The Formation of the American Chemical Society."

The members of the society visited many points of interest on April 13th, including several large chemical works.

Saturday night the dinner of the society was held at the Hotel Savoy. The dinner and the session of the society were attended by many ladies.

Among those present were the following former presidents of the society: Prof. J. W. Mallet, of the University of Virginia; Prof. Edmund Morley, of Adelbert College, Cleveland; Prof. Wm. McMurtrie, of New York, and Prof. George C. Caldwell, of Cornell University. Among other prominent chemists present were: Prof. Ira Remsen, of Johns Hopkins University; Prof. A. A. Noyes and Prof. Talbot, of the Massachusetts Institute of Technology; Prof. Gregory, of Colgate University; Prof. Charles Baskerville, of the University of North Carolina, and Prof. Moulton, of Vassar.

Prof. Wm. Ramsey, of University College, London; Prof. Emil Fischer, of Charlottenburg, Germany; Prof. Geo. Lunge, of Zurich, Switzerland; Prof. Adolph Von Baeyer, of Munich, and Sir Henry E. Roscoe, vice-chancellor of the University of London, were elected honorary members.

INDUSTRIAL NOTES.

The Marinette Iron Works Manufacturing Company, of Marinette, Wis., recently received orders for 5 125-H.-P. and 2 100-H.-P. Walrath gas engines.

The Gratz Lead Mining Company, of Gratz, Ky., has placed an order for concentrators and canvass plant with the Krogh Manufacturing Company, of San Francisco, Cal.

The Keystone Driller Company, of Beaver Falls, Pa., recently received an order from W. P. Hammon, of Oroville, Cal., for two No. 2 traction placer-testing Keystone drillers.

The Geo. F. Blake Manufacturing Company, of New York City, has secured an order for furnishing the pumping equipment to be installed in 2 Russian cruisers now being built at Kiel, Germany, and Cronstadt, Russia.

F. L. Smidth & Company, of New York City, engineers and builders of cement manufacturing machinery, have received the contract for equipping the plant of the Iroquois Portland Cement Company, now at Caledonia, N. Y., with Davidsen patent tube mills.

The H. K. Porter Company, of Pittsburg, Pa., has secured a Spanish contract calling for the shipment of four 45-ton locomotives to Bilboa. The company is about to forward 2 smaller locomotives for utilization on a narrow-gauge railroad at Dijon, France.

Manning, Maxwell & Moore, of New York City, have secured a contract from S. Oshima, the director general of the Imperial Steel Works at Tokio, Japan, for some $70,000 worth of rail

drillers, punches, riveters, lathes, drill presses and other machine tools.

The American Bridge Company, of New York City, is to furnish to J. G. White & Company, of New York, the structural steel work for the power plant for the Kalgoorlie Electric Power Company, Kalgoorlie, Australia. This plant consists of an engine house 43 ft. by 159 ft., with a lean-to 17 ft. by 40 ft., and a boiler house 41 ft. by 132 ft.

The entire power transmitting machinery, consisting of pulleys, couplings, hangers, collars, and including a mile of shafting from 3 to 9 in. in diameter, for the distribution of 3,000 H. P. throughout the immense new plant of the Singer Manufacturing Company, South Bend, Ind., now in course of erection, will be furnished by the Dodge Manufacturing Company, of Mishawaka, Ind.

The F. M. Prescott Steam Pump Company, of Milwaukee, Wis., has bought a tract of land at Wauwatosa, with a frontage of 485 ft., and is 250 ft. deep, extending along the spur track of the Chicago & Northwestern Railroad. Contracts have been let for the erection of a complete plant to be constructed of brick and steel, and comprise a completely furnished foundry and machine shop; also storehouse and power plant.

The Pelton Water Wheel Company, of New York City, is about to make shipment of a 900-H.-P. water-wheel equipment for installation in an electric railway company's plant in British Columbia. A 100-H.-P. plant to be used for operating an electric-light generator has been ordered for export to Pigeon Bay, New Zealand, while a smaller plant is now being prepared for shipment to a tea plantation in Java, East Indies. Fair-sized orders are also being executed for Apia, Samoa; Guatemala, Honduras; Sydney, Australia, and Tokio, Japan.

Arrangements are stated to be practically completed by which the working capital of the E. P. Allis Company, of Milwaukee, Wis., will be increased by $2,500,000. Among large foreign contracts, the Cananea Copper Company, of La Cananea, Mexico, has ordered 2 large horizontal blowing engines; the Andes Mining Company, of New York, has ordered a pumping plant to be shipped to South America; the Great Boulder Perseverance Gold Mining Company, of West Australia, has ordered 2 Holthoff-Wethey furnaces, and the Lathon Company, of Lancashire, England, has ordered machinery for a 20-stamp mill, 15-ton chlorination plant, electric-light plant and other supplies, to go to Brazil.

The B. F. Sturtevant Company states that the fire which visited its works at Jamaica Plain, Mass., on April 14th, proved to be far less disastrous than was first reported. Only the engine and electrical departments were injured. The power plant was started up with but a single day's delay incident to renewing belts damaged by fire, and the entire blower, heater, forge, galvanized iron and shipping departments, with the foundrys, patent shop, etc., were in full operation on that day and the shipments going forward as usual. No valuable office records were lost, the most serious damage occurring in the Advertising Department, where a large amount of printed matter was destroyed. Fortunately, however, an entirely new general catalogue was in press at the time and copies were issued on April 16th in time to meet all demands for information. New offices were established on April 15th in a nearby building and with the facilities at its disposal there is no likelihood of any delay in shipments except such as may occur in the electrical and engine departments, and arrangements are already made for handling this work.

TRADE CATALOGUES.

The Atlas Pipe Wrench Company, of New York City, is sending out copies of letters received from many parts of the United States testifying to the merits of Atlas wrenches.

The Stanley Electric Manufacturing Company, of Pittsfield, Mass., announces the issue of a new bulletin, No. 116. It illustrates a new type of S. K. C. static ground detector, designed for circuits carrying very high voltages, and is said to combine thorough reliability with absolute immunity for switchboard attendants from danger of shock. The phases of the instruments are charged statically through the medium of condensers; thus live wires are kept out of and entirely away from the instrument. The bulletin will be mailed upon request.

Wagon wheels peculiarly adapted for heavy loads and poor roads are made by the Electric Wheel Company, of Quincy, Ill., which issues a 74-page illustrated pamphlet describing them. For ordinary teaming the pamphlet recommends wheels with 6-in. tires. Wheels with wider tires are made for heavier work, the company keeping in stock metal truck wheels 20 in. to 60 in. in diameter, with tires from 1½ to 8 in. wide. The company also has special extra strong wheels for ore wagons, portable engines, well drills, portable saw-mills, etc. The company makes besides wheels log and heavy truck wagons and wagons for ordinary work.

"Smith-Vaile Pumping Machinery" is the title of Catalogue No. 22, an illustrated 124-page pamphlet issued by the Stilwell-Bierce & Smith-Vaile Company, of Dayton, O. The company states that recognizing the demand for economy in steam consumption it recommends the Smith-Vaile compound pumping engine to be operated condensing, if possible, where the steam pressure does not exceed 110 to 120 lbs. and the triple expansion pump for higher pressures. The company also offers a complete line of triplex power pumps, both single and double acting, to be operated by direct connection to electric motors, water-wheels, gas or gasoline engines, from line shafting or otherwise. Smith-Vaile condensers and air compressors are also shown in the catalogue.

MACHINERY AND SUPPLIES WANTED.

If any one wanting machinery or supplies of any kind will notify the "Engineering and Mining Journal" what he needs he will be put in communication with the best manufacturers of the same.

We also offer our services to foreign correspondents who desire to purchase American goods of any kind, and shall be pleased to furnish them information, catalogues, etc.

All these services are rendered gratuitously in the interest of our subscribers and advertisers; the proprietors of the "Engineering and Mining Journal" are not brokers or exporters, and have no pecuniary interest in buying and selling goods of any kind.

GENERAL MINING NEWS.

March Pipe Line Returns.—The runs of Pennsylvania oil averaged 92,567 bbls. a day in March, a gain of 2,929 bbls. a day over the average for February, says the Oil City "Derrick." The runs for March, 1900, averaged 95,022 bbls. a day. The March shipments were 93,082 bbls. a day, or 750 bbls. above the record for February. During March, Pennsylvania stocks decreased 15,139 bbls., while the Buckeye stocks were increased 188,606 bbls., making a net gain of 173,467 bbls., or about 5,600 bbls. a day. The net stocks of Pennsylvania oil were 13,174,717 bbls. at the beginning of 1901 and 12,865,464 bbls. at the close of March. Adding the net stocks of the Buckeye and other pipe lines handling Lima oil makes the net stocks at the present time 28,414,326 bbls. The net stocks of Lima oil held by the Buckeye and Indiana pipe lines on the last of December, 1900, reached 14,988,928 bbls., and 15,548,862 bbls. on March 31st. The Lima oil runs for March averaged 48,012 bbls. a day, 1,566 bbls. above the February average.

ALABAMA.

(From Our Special Correspondent.)

Tutweiler Coal, Iron and Railway Company.—This company has increased its capital to $1,000,000 and taken in the Messrs. Adlers, of Birmingham. The company has but one furnace, located at Vanderbilt, 4 miles from Birmingham on the Louisville & Nashville Railroad. The company has coal mines, coke ovens, limestone and ore properties which are capable of supplying a number of furnaces.

State Mine Inspector J. de B. Hooper has finally made out his official returns of the coal production in Alabama during 1900. There were 11 counties in the State producing coal and the total output was 8,273,362 tons, against 7,484,778 tons during 1899. The production by counties during 1900 was as follows: Bibb County, 965,493 tons; Blount, 13,490; Cullman, 3,000; Etowah, 20,255; Jefferson, 5,234,747; Marion, 37,058; Shelby, 120,417; St. Clair, 145,751; Tuskaloosa, 275,172; Walker, 1,417,489; Winston, 15,490; smaller mines, 25,000; total, 8,273,362 tons. During 1890 the production amounted to 4,090,409 tons, or less than half the amount produced last year. The production during 1901 it is estimated will reach more than 10,000,000 tons, provided there are no labor troubles.

ALASKA.

Northern Commercial Company.—All the Alaska trading and navigation companies are reported consolidated into two organizations under New Jersey laws, giving them a monopoly of the commercial wharfage, trading, and navigation in the Yukon, Klondike and Cape Nome gold regions. The new companies are the Northern Commercial and Northern Navigation Companies. The incorporators are Leon Sloss, Isaac Liebes, George H. Higbee and William Thomas, all of San Francisco. The amalgamation embraces the Alaska Commercial Company, the North American Transportation and Trading Company (Cudahy's), the Alaska Exploration Company, the Empire Transportation Company, and the Seattle-Yukon Transportation Company. The principal business of the 2 companies will be transacted in San Francisco. The Eastern office will be in Camden, N. J. The Northern Navigation Company is capitalized at $1,700,000, in 17,000 shares. There will also be an issue of $1,500,000 of 5% gold bonds, of which $200,000 will be placed in the Treasury. The capital stock of the Northern Commercial Company is $2,750,000, in 27,500 shares. In addition, there will be $4,250,000 of 5% gold bonds, $2,000,000 of vendors' bonds, $2,000,000 of working capital bonds, and $250,000 in bonds placed in the Treasury. The persons principally interested are said to be the Rothschilds of London, the Cudhays and Robert Dick of Chicago, C. Simon of London, and a few others. The board of directors will be selected soon from the directories of the consolidated companies.

ARKANSAS.

Boone County.

(From Our Special Correspondent.)

The first car of zinc ore from the North Arkansas zinc mines was received by the Granby Mining and Smelting Company, at Granby, Mo., April 8th, from Farvin & Lombard, who work the Alma Mine. It was also the first shipment over the new St. Louis & North Arkansas road, which has just been completed between Eureka Springs and Harrison, Ark., a distance of 56 miles. The ore was a low grade of silicate and the car cleaned up 40,100 lbs. of ore which netted $220.

ARIZONA.

Graham County.

Arizona Copper Company.—This company informs us that the production of its mines at Clifton during the month of March was 1,128 short tons of copper.

CALIFORNIA.

Alameda County.

(From Our Special Correspondent.)

Independent Salt Company.—This company has been organized by William J. Dingee, William E. Henshaw, Oscar T. Weber and Francis J. Heney, all of Oakland, Cal., who have secured 1,000 acres of salt-bearing land near Alvarado. The plant will be in working order in a few weeks. Percie H. Coward, formerly with the American Salt Company, will be manager of the new company, which will be independent of the trust recently formed by the companies surrounding San Francisco Bay.

Amador County.

(From Our Special Correspondent.)

Gwinn.—About 120 men are employed at this mine near Volcano, working day and night shifts. Several pockets of very rich ore have been discovered. Stoping continues in both shafts and development goes on. The large compressed air pumps keep the workings dry.

Kennedy.—At the last annual meeting D. E. Hayes was elected president and A. White secretary. At the mine connection has been made between the 2,100-ft. level and the new vertical shaft. It is the intention of the management to sink several hundred feet deeper and open up new ground by running levels at the 2,400 and 2,550-ft.

Rhetta Consolidated Gold Mining Company.—This company has been incorporated with a capital of $500.000. Directors: W. W. Worthing, J. A. Brent, Jno. Ross, Jr., W. W. Fitzgerald and W. B. Sampson. The company will work the Rhetta Mine, 4 miles north of Plymouth.

Zeila.—A survey is being made by the consolidated Jackson Company to determine the exact location of the end lines of the Zeila and the Consolidated Jackson ground, which adjoins the Zeila on the north. As soon as completed, work will begin on the Fleming Claim.

Calaveras County.

(From Our Special Correspondent.)

Baltimore Mining Company.—This company is to prospect the Whipple, New York and Baltimore Mines, about 2 miles west of Chapparell Hill. A new shaft is started. The old workings consisted of a 140-ft. shaft, from which it is said about $20,000 in gold was taken.

Fresno County.

(From Our Special Correspondent.)

Copper King Limited.—This company has begun shipping ore from its mines in this county to their smelter in Contra Costa County. The smelting plant will blow in about April 22d, with a capacity of 100 tons per day. The spring rains which damaged the roads delayed the shipments until the present date.

Inyo County.

(From Our Special Correspondent.)

Mazourka Mining and Water Company.—This company has been working a bar at 1,700 ft. and sluicing the gravel with good results. Work continues on the main tunnel and water has been struck at 2,470 ft. This tunnel was started 2 years ago. The company is composed of Los Angeles men, with A. M. Squires as superintendent.

Reward Mining Company.—A full force of men is employed on the property of this company, 10 miles southwest of Independence. High-grade ore is being hoisted. The erection of a 10-stamp mill is contemplated.

Eclipse.—This mine, near the Reward, is sinking a new shaft which is down 150 ft. Geo. Montgomery is superintendent.

Kern County.

(From Our Special Correspondent.)

The contract for grading the railway from Gosford, on the McKittrick branch line of the Southern Pacific, to Summit, has been let and the construction camp established. Proposals will be asked for during the coming week for laying rails, and work will be rushed to completion before fall. J. T. Williams has been appointed chief engineer of the road. This road will tap the Sunset Oil District and then run in a northerly direction toward the McKittrick, taking in all the large producing wells.

Croesus Company.—This company, which is working the Primrose Mine, has contracted for a 50-ton cyanide plant, which is to be in operation in about 2 months. About 8,000 tons of tailings have accumulated on the dump.

Mono County.

A consolidation of many mining claims in Bodie District has been arranged. A company has been formed with a capital stock of 200,000 shares of the par value of $1 each, to take over the Noonday, North Noonday, Addenda, Red Cloud, Concordia and other claims, making fifteen in all. The principal stockholders are J. B. Haggin and the Hearst estate, who have subscribed for 40,000 shares each, and the balance of the stock has been taken by J. S. Cain, A. J. McCone, W. H. Metson and John W. Kelley. It is proposed to put new machinery on one of the shafts and reopen the 400-ft. level in the Noonday mines, where large bodies of ore are known to exist. The plans include the introduction of electric power at some future time.

San Diego County.

Lepidolite Mines.—Suit has been brought in the Superior Court against Wade Chance, of New York City by R. G. Douglass and Mrs. R. O. Butterfield, owners of 2 lepidolite mines at Pala. It is alleged that the New Yorkers secured an option on the property and carried on development work for some time. The representatives of the company, it is charged, ran tunnels and shafts and then covered them up with waste to conceal the value of the property. A lien was given to the firm upon 1,000 tons of ore to secure the payment of money advanced, but now the firm claims a lien upon the whole property and is seeking to foreclose it.

Shasta County.

Bully Hill.—These mines and the new smelting plant have been transferred by Capt. J. R. De La Mar to the Bully Hill Copper Mining and Smelting Company, in consideration of $2,249,000. The main deed was executed in New York on March 27th. The property consists of the 19 claims that comprise the Bully Hill Group, the entire interest in an option on 4 claims adjoining, all the personal property, including machinery, tools, implements and tenements of both mine and smelter, all rights of way and water rights, and the Pit River and Squaw Creek bridges. De La Mar also agrees to secure patents on a certain 5 of the claims that are as yet unpatented. The purchasing corporation is organized under the laws of New Jersey. The transfer is apparently purely a formal one from individual to corporate ownership.

(From Our Special Correspondent.)

Globe.—A shaft has been sunk on the ledge and a crosscut is now being run to intersect the shaft below the old workings. The ledge is from 6 to 36 in. in width, carrying high-grade gold and silver ore. The concentrates are shipped to the smelter. The property is west of Igo.

Highland.—This mine, near French Gulch, is to be opened up by M. C. Peck, who holds a bond on the property. The old works are to be cleaned out and active development work commenced.

Phoenix.—E. P. Connor, the owner of this claim on Salt Creek, 4 miles west of Redding, has given a 6 months' bond to C. Watson & W. D. Watson. The shaft is down 50 ft. in high-grade ore. Engine, boiler, pumps and hoist have been installed. They will start up with 10 men.

Pioneer Gold Mining Company.—In the Recorder Tunnel on this property at Bully Hill a winze has been sunk 7 ft. on a shoot of copper sulphide ore which assays 19% copper.

Trinity County.

(From Our Special Correspondent.)

Ajax.—This group of mines on Oregon Mountain, now under bond to C. D. Galvin, is to be developed with a large force of men.

Biwabik Mining Company.—This company now has six large size standard gauge locomotives at the mine. All will be used this season in handling stripping and ore cars. The company has bought an 80-acre tract close to the mine from the C. M. Hill Lumber Company and others for $15,600. The deal is practically a lease with $15,000 as the consideration for the royalty on the first 100,000 tons, the royalty on ore subsequently mined to be 30c. a ton. The property has been found to contain approximately 100,000 tons and possibly more. The 100,000 tons must be taken out in 3 years. Biwabik will probably mine more than the 925,000 tons of last year.

Fourth of July.—This property, near Pony, is worked by H. T. Bragdon. The ore is proving high value, the last car running $75 per ton.

Galvin Gold Mining Company.—The new wheel has been put in; also an extension to the digging ladder, and the dredger has started up in good condition for the season's work.

Lappin.—A boiler, engine hoist and pump are being installed at this mine in Deadwood. Sinking on the ledge below the 100-ft. level to the 200-ft. is in progress. The ledge on the 140-ft. shows high-grade ore. There are 5 tunnels on the property.

Nash.—This hydraulic and drift mine on Coffee Creek is working steadily and operations will soon be extended to a second channel. The new tunnel has been completed and the water will be turned on and hydraulicking will be substituted for sluicing. William Maitland is superintendent.

Pennington.—This property has shipped several cars of 13% copper ore to the Butte smelters during the past winter.

Sweepstake.—Tunnels are still being run on this property on Oregon Mountain to ascertain the extent of the gold-bearing gravel, and as soon as this work has been completed the construction of a ditch from Canyon Creek will begin. Seven pans of gravel from this claim are said to have yielded $22.50.

Tuolumne County.

Kodak.—At a depth of 35 ft. in this claim, 2 miles south of Carters, the ledge has been found to be over 12 ft. wide, and 150 tons of ore will be milled. Assays average over $35 per ton in free gold, besides the sulphurets.

Marlow Mining and Development Company.—This company will develop its gravel property by running an adit tunnel to cut under the deposits. A large chamber will be excavated and the gravel will be hydraulicked into sluice-boxes. The company owns several miles of ditches which give a pressure of about 300 ft. C. B. Leek is manager.

Republican.—This group of mines, comprising the Republic, Mammoth, Harrison, White Oak and Democrat Mines, together with 140 acres of land, besides ditches water-rights it now used, is worked on a large scale. All its machinery is run by compressed air obtained by water power. The mill is running on good ore.

Rosedale Ranch.—These drift gravel mines located on the east side of Table Mountain, are being worked by an incline shaft, the gravel being hoisted by a 10-H. P. gasoline engine and washed in ordinary dump boxes and sluices. The deposit averages about 6 ft. in depth.

COLORADO.

Gilpin County.

(From Our Special Correspondent.)

Gilpin & Boston Mining Company.—This company has purchased the Nemeha on Bobtail Hill, about 4 months ago, and now has bought the Cotton, adjoining, price not mentioned. The 400-ft. levels are showing up splendidly. W. Ballantyne, Central City, is manager.

Mackey-Burroughs.—Sinking goes on and a good body of ore is being opened up. A new rope 1,300 ft. long and ¾ in. thick has been received. A. Christopher, Central City, is manager.

Ophir-Burroughs.—Sinking has started in the south shaft at 1,300 ft. About 40 men are employed and a large production is being taken out, all of good grade. A. Waters, Nevadaville, Colo., is manager.

Patch Mining Company.—A gasoline engine has been installed in the 1,400-ft. level of the California, to furnish power for operating the blower to furnish better air throughout the workings. A new cable, 1⅛ in. thick and 3,000 ft. long, has been put on the hoisting drum. The water is now down close to the 2,000-ft. level and Manager McCann expects to have it down to the bottom, 223 ft., inside of another month.

Penna.-Central Gold Mining Company.—A large force of leasers are at work at the Delaware property and heavy shipments of good concentrating ores are being made to Idaho Springs. J. J. Reilly, Central City, is manager for Pennsylvania men.

Stewart.—Eastern men have taken hold of this property and have installed a hoisting plant and are erecting a shaft building. The property has a good record as a producer, but has been idle some time.

Wizard Gold Mining Company.—A gasoline hoister, a motor and Durkee lighting electric drill has been purchased by the contractors, who are running a contract of 900 ft. in the Wizard Tunnel. Eastern parties are interested.

Lake County—Leadville.

(From Our Special Correspondent.)

The annual spring snowfall came later than usual, and this week shipments have been somewhat retarded.

A. V. Shaft.—This new downtown shaft of the Sheedy-Kountz syndicate is down 450 ft. Another 100 ft. and drifts will be sent out to search for the Bon Air shoot.

Ballard.—The surface plant is being overhauled and the shaft repaired preparatory to resuming shipments on a large scale for the summer. The past 10 months' development work has opened up an excellent gold ore shoot.

Cloud City Mining Company.—The new deep shaft is down 460 ft. So far but little water has been met.

Dinero Leasing Company.—The lessees have the water flow handled and are sinking the shaft to open the lower contacts, where a known ore shoot exists. The shaft will be deepened 100 ft.

Elk.—After shipping steadily from the Elk Claim upper levels for some months, Lessee Ovens is going after the lower ore bodies of the Elk and Donovan claims and has his shaft on the Elk down 675 ft. in porphyry.

Greenback Mining Company.—After handling the water satisfactorily the big shaft is being sunk an additional 200 ft. below the 1,100-ft. level. A great mass of iron sulphides is being explored which can be mined to better advantage after the shaft is deepened.

New Fryer Hill Mining Company.—The drift has opened a good manganese body, from which shipments are made to Chicago. Some lead ore is also encountered.

New Leadville Home Mining Company.—The new stock is being issued at the rate of 40 shares for one and the transfer will be completed soon. The company is producing 350 tons of ore per day.

Nubian Mining Company.—A large amount of development and prospecting work is opening up the big ore shoot and shipments continue steady of a high-grade ore through the P. O. S. territory. The Midland Claim is also producing.

Penn Mining and Leasing Company.—About 125 tons daily are shipped of silicious gold ores and much important development is being done.

Rialto Mining and Leasing Company.—Ground is being recovered which was lost by a break in pumping plant. The management also announces that new machinery will be installed in No. 2 shaft to sink it to 1,000 ft.

South Winnie Mining Company.—The recent strike has opened up to 14 ft. of ore and the management feels confident it is the orginal ore shoot of the Fanny Rawlings. The stuff averages 40 oz. silver and runs well in gold and lead. This lease is controlled by local men and is on 5 acres of the Fanny Rawlings territory.

Valentine Mining Company.—A break in the machinery flooded the lower workings of No. 1 shaft and the water rose from the 500-ft. to the 412-ft. level. New machinery is to be put in place and the water taken out.

San Miguel County.

(From Our Special Correspondent.)

Belle of Ophir Gold Mining Company.—This company has been incorporated by Col. W. Douglass, Geo. A. Marshall and Herman H. Dunham, of Denver, Colo., with a capital of $100,000. It will work gold properties near Ophir and begin operations as soon as the weather will permit.

Milwaukee-Ophir Company.—This company has taken possession of the Crown Point Group at Ophir and increased the force. The property embraces 4 claims. Last summer at Crown Point No. 2 there was opened at grass roots 4 ft. of silver-lead ore, a large proportion of which netted from $350 to $475 per carload. The same company is also developing the Deadwood property and driving a tunnel for the Nevada vein with about 600 ft. yet to run. The tunnel will be 2,000 ft. long, and should development result favorably a large milling plant will be erected. Geo. R. Dolf is resident manager.

Ophir Consolidated.—This company is working 25 men on the Silver Bell, shipping enough first-class ore to pay operating expenses. The plans embrace the erection of a large milling plant, with tramway to the mines. W. S. Buckley, of Telluride, is general manager.

Peck Cyanide Plant.—This plant, erected for the treatment of the 20 years' accumulation of tailings from the Smuggler-Union and Marshall Basin mills, capacity 200 tons per day, will start up with the thawing of the ground. The partial season's work of last year was successful enough to justify doubling the capacity of the plant.

Summit County.

North American Dredging Company.—According to B. S. Revett, superintendent of this company, working ground near Breckenridge, the company is to start work on a large scale soon. The company will employ 2 dredges.

Teller County—Cripple Creek.

(From Our Special Correspondent.)

The Cripple Creek District is at present suffering from the usual April snowstorms which hamper prospecting and keep down shipments, besides causing considerable trouble with surface water.

Black Bell.—A good production is maintained from the Parks and Berger lease on the south end of this property. The ore is mainly coming from the 150-ft. level. Work is also pushed to cut the ore shoot on the lower levels. Con-

siderable development work is also being done on Bradstreet lease on the block adjoining the Parks and Berger block.

Doctor-Jack Pot.—It is understood that the net profits for this mine for March will be close to $100,000. The company has just declared its fourth monthly dividend. It is understood that the company has a very good surplus in the treasury and that development work is well ahead of the production.

Elkton Consolidated Gold Mining Company.—The pumps are still working away and the water is being lowered, though it is rumored that unwatering is not as rapid as was at first anticipated. In the meantime production is maintained from the upper levels. While the water is a very expensive luxury it will not permanently injure the property.

Gold King Mining Company.—After passing one dividend this company has again declared a dividend at the usual rate of 3c. per share per quarter. The passing of the dividend was made necessary by the installing of new machinery. The property is situated in Poverty Gulch and was the first producer in the district.

Granite Gold Mining Company.—Part of the dump of this mine which is cribbed up to a considerable height during the wet weather slid down the hill and entirely demolished a cabin which was occupied by a miner and his family. The slide came without warning and the miner, his wife and 4 children were killed. The property is owned by the Smith-Moffat syndicate and is situated on Battle Mountain near the Portland Mine.

Sedan Gold Mining Company.—Work is pushed on this and the Sunshine properties getting ready for the law suits that are to come up again before long. The case involves the question of apex.

Semour vs. Colburn.—Judgment has just been awarded B. F. Semour against E. A. Colburn in the United States Court in Denver for the sum of $200,000. The plaintiff alleged that Mr. Colburn had agreed to sell the property of the Gold King Mining Company in Poverty Gulch for $2,000,000. Mr. Semour was to receive $200,000 for producing a purchaser, which he claims that he did, but that Mr. Colburn refused to complete the deal. He therefore brought suit to recover the commission. It is understood that the case will be appealed.

IDAHO.

Blaine County.

Hailey District.—According to a local paper, mills are now running on the Hailey gold-copper belt having a total capacity of 90 stamps. These mills are on the Croesus, the Tiptop, the Golden Star, the Hattie, the Jumbo, and the Camas No. 2. The mills of the Tiptop, the Hattie, the Golden Star, the Jumbo, and the Camas No. 2 are likely to be enlarged before next winter, while new mills at the Croesus, the Big Camas, and the Deadwood are almost a certainty. The Croesus, the Hope, the Deadwood, the Big Camas, the Camas No. 2, are either under bonds and options to buy, or subject to options.

Shoshone County.

Gov. Hunt abolished martial law in the Coeur D'Alenes on April 11th. It was established on May 1, 1899, by Gov. Steurenberg, following the blowing up of the Bunker Hill & Sullivan Mill by a gang of ruffians made up of members of the local miners' union. The Governor says he has personally investigated prevailing conditions in the Coeur D'Alenes, finding the people law-biding and determined to uphold the laws.

Cour d'Alene Lead Production.—It is stated that owing to the poor condition of the lead market the mines will reduce their output 2% or so. This will be effected by milling lower grade ores, doing dead work and making improvements that were postponed when production was heavy. The normal working forces of the mines will be reduced very little, if any, it being the purpose of all the mine owners to give as many men employment as conditions will warrant, but the mines in all probability will not work on Sundays for a few months.

INDIANA.

Coal Miners' Wages.—The joint conference of the miners' delegates and the block coal operators resulted in a victory for the miners, the operators conceding them the right to buy powder in the open market. Last year's wage scale will be in effect until October 1st, when the day men will receive an advance of 15c. per day.

KENTUCKY.

About 3,000 coal miners in Hopkins, Christian and Webster Counties, who were ordered some time ago by the officials of the United Mine Workers to strike, failed to obey the order. Only about 2% of the men are said to have struck and the mines are operating as usual. This is the second occasion on which the miners have disregarded an order to strike.

MICHIGAN.

Copper—Houghton County.

Franklin Mining Company.—At the annual meeting the following directors were elected: F. H. Raymond, G. H. Flint, D. L. Demmon, J. K. Hosking and J. Q. Bennet. Mr. Bennet is the new director, vice P. G. Morrison, resigned. In answer to a query by a stockholder, Treasurer Demmon said that the company expected to be able to furnish enough rock by July 1st to keep 3 stamps running.

(From an Occasional Correspondent.)

A new firm, headed by Chas. Hibbard & Sons, have started to quarry red sandstone near Trap Rock River at the head of Lake Linden. The material for the foundations of the Mohawk and Wolverine Mills is to be supplied from this quarry. J. W. Wyckoff, formerly of the sandstone quarries at Portage Entry will have charge.

Baltic.—The engine house at No. 3 shaft was destroyed by fire on April 8th. Being a light frame building, the machinery was only slightly injured.

Belt.—An effort to float this propery has failed and Capt. W. A. Dunn, who held an option, is now removing the pumps from the mine.

Calumet & Hecla.—The company is pushing work at the engine house, built last fall at No. 15 shaft on the Amygdaloid vein. Concrete foundations for the engines are being built, and a steel crane, from William Sellers & Company, of Philadelphia, of 50-ton capacity, is on the ground ready for installation.

Tamarack.—At the great No. 5 shaft work on the new steel shaft house is progressing rapidly, and the building is now about ready for the roof. The sides are being sheathed with corrugated iron.

Tri-Mountain.—The foundation for a new rock-house is being built at No. 2 shaft. It is to be a frame structure with a corrugated iron roof.

MINNESOTA.

(From Our Special Correspondent.)

There is no sign of ore shipments, and no ships have started. The engineers' strike has lasted longer than most vesselmen thought, and there is no sign of a change in the situation. The rates of the ore men are about 70c. from the head of the lakes, and those of the outside vessel pool are about 90c. As the ore men control shipping to move half of all ore to be taken out of the entire Lake region, they will probably win.

Iron—Mesabi Range.

(From Our Special Correspondent.)

The Eastern Minnesota road has paid $150,000 for about 7,000,000 tons of lean non-Bessemer ore in section 14, T. 58, R. 19, on more than half of which there is a royalty of 18c., the lesser portion being fee. There is an annual minimum of 50,000 tons on the lease. Almost the entire body is non-Bessemer, much of it is less than 55% iron and up to 0.07 to 0.1% in phosphorus. Only one hole shows any considerable quantity of Bessemer ore and that is not deep. This sale at this price is one of the most astonishing of the recent transfers. The Eastern has secured a large acreage all along the range, running from Virginia village westerly, and is exploring. It has nearly all the 19 diamond drills that E. J. Longyear is operating and has made contracts with Cole & McDonald for some of the 18 drills they are running. The policy of the company is to find ore for future lease to mining concerns.

American Mining Company.—This company has resumed stripping at its Alpena Mine and will be shipping to dock in a week. Shipments from the Alpena and Sauntry will be much larger than last year.

Biwabik Mining Company.—This company has bought the old Cincinnati shaft, just east of its open pit, and will utilize it for pumping. A tunnel will be driven from the workings of the shaft, connecting with drains from the open pit. The Biwabik reached water level last fall and the water question must hereafter be considered. Emergency pumps will be installed in addition to the regular force.

Mahoning Ore and Steel Company.—This company has started cleaning up the big open pit preparatory to mining next week. The contractors have been at work some time and have made a large addition to the pit over last year.

Oliver Iron Mining Company.—The Oliver and Lone Jack Mines have reopened for the season, and will probably make larger shipments than last year, when they produced but 244,000 tons between them. The Mountain Iron is also at work, several shovels and a large force of men being cleaning up. The machinery has been thoroughly overhauled.

MISSOURI.

Jasper County.

(From Our Special Correspondent.)

Joplin Ore Market.—There was a very strong demand for zinc ore last week, with a sharp advance, and choicest grades sold at $1.50 per ton higher. The advance came April 8th, when ore from the Owl Mine on the Arkansas Lease at Belleville, sold at $28 per ton to the Edgar Zinc Company. On April 10th the ore from the Tom S. Mine at Prosperity, from 500 to 600 tons, sold at $26.50 per ton, an advance of $2.50 per ton over any previous offer. This was purchased by the Illinois Zinc Company. The same company purchased the big pile of the Connor & Wise ore at Prosperity, between 1,200 and 1,500 tons, for $29 per ton. Lead was steady all the week at $23 per 1,000 lbs.

Following is the output in the Joplin District for the week ending Saturday, April 13th:

	Zinc lbs.	Lead lbs.	Value.
Joplin	2,604,320	368,610	$44,287
Galena-Empire	1,089,590	155,340	16,648
Carterville	3,000,560	289,320	41,160
Webb City	404,360	39,840	5,556
Aurora	1,000,980	12,420	10,704
Oronogo	519,800	16,240	7,155
Neck City	340,720	.....	4,600
Zincite	552,310	.....	7,732
Granby	299,000	34,000	3,370
Spurgeon	254,280	109,990	5,327
Cave Springs	237,600	11,170	3,277
Central City	176,600	11,490	2,472
Carl Junction	131,580	.....	1,710
Carthage	127,840	.....	1,662
Duenweg	32,650	54,200	1,659
Stotts City	99,200	.....	1,389
Peacock City	83,370	7,580	1,216
Harrison, Ark.	40,010	.....	220
District total	10,994,770	1,110,200	$160,154
Total 15 weeks	147,857,160	18,829,300	$2,189,849

Zinc value for week, $134,712; lead, $25,442. Zinc value, 15 weeks, $1,760,769; lead, $429,080.

During the corresponding week last year the best grades of zinc ore sold for $33.50 and lead at $27. The sales were less than last week by 540,600 lbs. of zinc and 47,940 lbs. of lead, but the value was greater by $14,589. For the first 15 weeks last year the sales were less than this year by 6,919,760 lbs. of zinc and 2,403,220 lbs. of lead, but the value was greater by $427,328. Compared with the previous week the sales showed an increase of 41,130 lbs. of zinc and 11,880 lbs. of lead and the value was greater by $1,856.

Joplin Lead Smelter.—The new lead smelter has made its first week's run. Besides pig lead, the smelter will manufacture mineral wool from the slag.

Cordell Lead and Zinc Company.—The stock of Edward C. Davis and Joseph C. Allen, non-resident stockholders of this company, to the amount of $1,500, was attached last week by Deputy Sheriff Lavery on a process issued in favor of W. R. Robertson. The grossest misrepresentations have been made by the promoters of this company which was capitalized for a large sum with nothing in the shape of tangible assets but a mill and leases which were subject to forfeiture whenever work ceased on them for 30 days.

International Zinc Company.—Receiver W. K. Trimble recently received an order from the Circuit Court of Jasper County authorizing him to sell the Blue Wing mine, mill and lease on the Edgar ground at Carterville to the New York reorganization committee of the company for a sum sufficient to pay the local debts, the receivers' fees and the court costs, which all told are about $4,950. The committee are given 15 days in which to take the property, after which the receiver can sell it at any time within 20 days at private sale on the best terms possible, and, failing to make a private sale, he is to advertise and sell it at public auction within 10 days. The mill cost $12,000, while the equity in the lease is estimated worth $8,000 to $10,000.

Joplin & Galena Consolidated Zinc and Lead Company.—Judgment against this concern was rendered in the Circuit Court of Jasper County on April 8th for $14,530 and the attachment of A. A. Cass and others was sustained.

Mosley Mining Company.—This company has just sold its mill and 10-year lease at Prosperity to Chicago parties for $60,000. The owners of the property were H. C. Wallace, G. W. Taylor, G. R. Mosley, G. A. Noel, J. C. Williams and T. F. Coyne, all of Webb City.

Narragansett Mining Company.—The plant of this company at Webb City has been sold under execution to John C. Guinn, of Georgia City, for $1,350, which does not include a lien of $700 held against the property by Mr. Guinn.

MONTANA.

Gallatin County.

Moline.—According to a local paper, Col. O. P. Chisholm has recently secured control of these mining properties on the Boulder and is going to do considerable work the coming summer. He has purchased from W. A. Clark, of Virginia City, a 10-stamp mill made by the Risdon Iron Works, of San Francisco, and expects to keep the mill going night and day with ore taken from the Moline and Boulder mines. The ore is said to run from $10 to $40 per ton in gold and Col. Chisholm expects to crush about 20 tons per day. Owing to the snow and the necessary repairs on the mill, operations will not commence until May 15th or June 1st. He will employ 3 men in the mill and 10 in the mines.

Granite County.

(From an Occasional Correspondent.)

Several properties wait with their second-class ore assaying between $14 and $20 for the starting of the mill of the Montana & Denver Reduction Works at Beartown.

Anderson.—Mr. Gowan has shipped a car of first-class ore to Butte; reported value, $80 per ton.

Crescent.—Shugen & Lesser have about 100 tons of ore on the dump. Their first-class ore assays $100 per ton.

Fair View.—This claim at Turnbull is shipping steadily to the Colorado Smelter at Butte.

Guaymas.—This property, belonging to Ritchie, Mitchell and Mussigbrod, is under lease to Messrs. Smith & Read, who have an 18-in. vein of $30 ore, and intend to put on an Ingersoll-Sergeant baby drill.

Nancy Hanks.—L. C. Parker shut down at this Garnet claim in December, 1900. He sunk a winze 100 ft. in quartz, encountering once in awhile streaks of $100 ore. As a new shaft about 150 ft. deep was required for an economical work he gave up his lease.

Red Cloud.—The Mussigbrod Mill is running since March 16th, turning out about 60 tons of concentrates at $130 per ton per month. Gold bullion returns are about $2,500 per month. Tunnels No. 1 and No. 2 show ore 18 in. wide, averaging about $20. The shipping ore runs as high as $100 per ton in gold. Level No. 1 has a vein 2 ft. wide of $20 ore. Between level No. 1 and tunnel No. 3 is an ore shoot developed 700 ft. long, 100 ft. high and 2 ft. wide of $20 ore. The best ore selected to a lot of one ton assayed at the Colorado Smelter at Butte 38 oz. in gold. The Mussigbrod Mill handles $18 ore, with a loss in tailings of $3 per ton. For the handling of the slimes 3 canvas tables covering 3,300 sq. ft. are used, producing slimes of an average value of 8 oz. gold per ton. About 45 men are employed at the Red Cloud Mine. Mitchell & Mussigbrod are owners.

Shamrock.—This property is under lease to Messrs. Hannifin and Mr. Masters. They have about 150 ft. of second-class ore, assaying about $17 in gold per ton on the dump.

Silver Bow County.

Anaconda Copper Mining Company.—Six weeks ago 60 members of the machinists' union, employed by the Anaconda Copper Mining Company at Anaconda, went on a strike for a 9-hour day at 45c. an hour. Now it is reported 600 men are affected by the trouble with indications pointing to a protracted struggle. The Moulders' Union has under similar grievances joined the strikers as a result. The machinists employed at the Washoe Works, the new smelter, have also struck. The mines of the Anaconda at Butte have been closed down several days.

Boston & Montana.—This company has applied to the Supreme Court for an order requiring the Montana Ore Purchasing Company to file additional bond of $300,000 in Pennsylvania case. Court will hear motion April 22d. Application was made on affidavit of Frank Klepetko, manager of the company, who alleges that the Ore Purchasing Company has extracted ore since giving bond to the amount of $1,257,934, which is $300,000 more than liability of present bond.

The Montana Ore Purchasing Company later sprang a surprise by filing a motion to vacate the injunction the Boston & Montana secured on the ground that no reason exists for it, in view of the court's decision recently made in the case of Adolph Wetzstein against the Boston & Montana that the order of the court from which the appeal was taken was within the lower court's authority and discretion. This motion if granted would relieve the Montana Ore Purchasing Company of the necessity of putting up the increase in bonds asked by the Boston & Montana. The Supreme Court will also hear this motion April 22d.

Kidder, Peabody & Company, of Boston, announce they have been requested to arrange a consolidation of the Boston & Montana and Butte & Boston companies with the Amalgamated Copper Company, upon some equitable basis. The firm states that before undertaking to arrange terms of the consolidation it will be necessary to have deposited with them 135,000 shares of Butte & Boston and 100,000 shares of Boston & Montana. The directors of both companies recommend the deposit of holdings upon the following terms:

Deposits of stock must be made on or before April 25. In case the arrangement is not completed within 7 days after that date, the stock deposited will be returned.

Depositors will have 10 days after the announcement of the terms to accept either of the following propositions:

To receive such number of shares of the Amalgamated Company as may be called for under the terms of the agreement.

Or to receive $375 per share in cash for Boston & Montana and $92.50 per share in cash for Butte & Boston.

Or to withdraw the stock deposited without expense.

In case any underwriting is necessary, Kidder, Peabody & Company agree that all holders who elect to exchange for Amalgamated stock may share in it pro rata.

Pennsylvania.—A portion of this mine was closed on April 13th through injunction proceedings instituted by the Montana Ore Purchasing Company and the Johnstown Company, Heinze corporations, against the Boston & Montana Mining Company, and 250 miners are idle. The suit was brought to quiet title to some ore veins which Mr. Heinze says apex with the lines of the Rarus and Johnstown claims, Heinze properties. The plaintiff alleges that the veins are being worked through the Pennsylvania. Judge Clancy issued the injunction.

Smokehouse.—At this Butte mine night and day shifts are working on an excavation to be used to install a battery of boilers for a steam power plant instead of the electricity now in use. Steam is already in to work the pump. A huge smokestack will also be built. Sinking still continues, but nothing of value has yet been encountered.

NEVADA.

Lincoln County.

The Utah & California Railroad, which is backed by the San Pedro, Los Angeles & Pacific Company, has secured a decision from the Land Office at Carson concerning the grade at Uvada which the Utah, Nevada & California, a branch of the Oregon Short Line, has been seeking to secure.

Late reports state that the forces of Senator W. A. Clark have seized both ends of Tunnel No. 1, west from Uvada, and declare that they will make their stand there against the forces representing the Harriman syndicate and Union Pacific interests. The Oregon Short Line men are laying tracks night and day and expect to reach the tunnel in 4 or 5 days. The sheriff of Lincoln County has asked that armed men be withdrawn.

Storey County—Comstock Lode.

The official report of the drainage operations in the C & C shaft on the Comstock lode states that the water had been lowered to a point 219 ft. below the 1950-ft. level station. This is the lowest point yet reached under the present system of pumping with the hydraulic elevators. The water is now well below the 2,150-ft. level. No. 1 elevator, which is now being run continuously, has been fitted with a new throat piece and nozzle which have increased its efficiency, and by introducing compressed air into the discharge column at a point 150 ft. below the point where the water empties into the Sutro Tunnel connection the work of lifting the large volume of water has been greatly assisted, and the work made easier for the elevator. This is a novel feature in the pumping, which, when developed, may facilitate the drainage of the Comstock to much greater depths.

OHIO.

Belmont County.

Empire Mining Company.—This company has arranged to purchase 30,000 acres of coal lands, including 5 operating mines, reached by the Wheeling & Lake Erie. W. P. DeArmit, who for years was president of the New York & Cleveland Gas Coal Company in the Western Pennsylvania bituminous field, is president and general manager. Samuel B. Schoyer was elected secretary and Isaac W. Frank treasurer. The directors are Louis F. Newman, Springfield, Mass.; William L. Kann, Jacob Kaufmann, Sol. B. Schoyer, Jr., Joseph R. Paull and Mr. Park, of Pittsburg. The purchase price of the mines and options is said to be in the neighborhood of $600,000. It is the intention of Mr. DeArmit to spend nearly $300,000 in modernizing the 5 mines under operation and opening others. The plans provide for one of the largest coal plans in the country. The property has a frontage on the Ohio River of 5 miles and extends from Bellaire into Belmont County. The company is capitalized at $5,000,000, and has been bonded for an equal amount. The average price paid for the property, exclusive of the 5 operating mines, is said to be in the neighborhood of $15 per acre.

PENNSYLVANIA.

Anthracite Coal.

Thirty-seven separate suits were filed April 12th at Pittsburg in the United States Circuit Court under the Inter-State commerce law, in which it is charged railway companies discriminated in favor of the Standard Oil Company. The suits are against the Western New York & Pennsylvania, the Pennsylvania, the Erie, the Lehigh Valley, the Delaware & Hudson, the Boston & Maine and the Fitchburg. The plaintiffs are the Pennsylvania Refining Company, John Schwartz & Company, Rice & Robinson, Rice, Robinson & Fegan, the Independent Refining Company, the Oil Creek Refining Company, and the American Oil Works Company, Limited, all independent refiners. The suits are to recover alleged excessive freight charges or discriminations in favor of the Standard Oil Company in amounts ranging from $211 to $8,597, making a total of $125,000.

Delaware & Hudson.—Trouble is reported at this company's mines. The General Grievance Committee of the Mine Workers is trying to get the company to resume work at the Boston and No. 2 mines at Plymouth, where 1,000 men are idle. The company shut the mines because the miners refused to pay helpers union wages.

Lehigh Valley Coal Company.—The company has refused the demand of the striking miners at the Prospect, Oakwood, Midvale and Henry collieries, to reinstate the discharged men for whose sake the strike was called, and there are no present prospects of a settlement. The company's officials say that the discharge was for disobedience of orders when damage to the company's property was involved. There are said to be over 5,000 mine workers on strike at different collieries in the Wyoming valley.

Mitchell Coal Company.—A deal affecting Blair and Cambria counties coal properties is effected, through which all the interests of this company pass into the control of the Webster Coal and Coke Company, a Lehigh Valley concern, headed by T. H. Watkins. The Lehigh capitalists have recently acquired the coal property of John C. Scott & Sons at Summer Hill, the Cresson Company's shaft at Cresson and the Amsby Mines at Amsby, in addition to 40,000 acres of undeveloped lands. The latest deal includes large operations at Gallitzin, Hastings, Bens Creek and Nanty Glen in Cambria County and the Bennington operations in Blair County, a large mine at Osceola, Clearfield County, and 10,000 acres of undeveloped lands in Cambria County recently purchased by J. L. Mitchell from Judge Barker and others. That also embraces the Gallitzin Electric Light Company, the Gallitzin Water Company, the Hastings Electric Light and Water Company and 4 large merchandising companies carried on by Cortright & Company. The consideration is reported to be upward of $2,000,000.

Natalie.—One thousand men and boys are on strike at this colliery at Shamokin because the Shamokin Coal Company would not accede to its demands. The men ask that James Bateman, inside foreman, and Conductor John Yeager, of the miners' train, be discharged, and that trainmen running on the company's road between Natalie and Locust Summit be granted a 10% increase in wages.

Stevens.—The employes of this colliery, West Pittston, have struck because the union men objected to several non-union ones, who refused to become members of the United Mine Workers. The trouble has been brewing for the past month. Several men conferred with the officials, but received no satisfaction.

Bituminous Coal.

(From Our Special Correspondent.)

A car-load of coke from Springfield township was coked last week at Oliver and the grade of coke turned out is said to have been very good. It runs low in sulphur.

James E. Roderick, chief of the bureau of mines in the department of the interior of Pennsylvania, has finished his compilation of statistics showing the amount of bituminous coal and of coke produced in the State last year; also the number of persons employed and those injured in that time. The combined coal production of the First, Second, Third, Seventh and Ninth districts, in the territory commonly called the Pittsburg District, was 41,531,707 tons. Of this amount the Pittsburg Coal Company, although the report does not show it, produced about 20,000,000 tons, and the Monongahela River Consolidated Coal and Coke Company upward of 5,000,000 tons.

The total production of bituminous coal in the ten districts of the State is shown as 79,318,362 tons; the total coke production as 12,185,112 tons from 30,120 ovens.

The number of persons employed in the bituminous district was 109,018, with fatal accidents to 265 men and injuries to 584.

Morris L. Painter, who began a railroad 1 mile long to connect his new 100-oven coke plant near Mammoth with the Sewickley branch of the Pennsylvania Railroad, about a year ago, and was sued by the H. C. Frick Coke Company for trespass, has won his suit in the Supreme Court; work will start at once on the railroad.

Cambria Steel Company.—This company is defendant in a suit to recover nearly $61,000 on a coal lease, given by Thomas Reiner and others to the Mahoning Coke Company in 1884 at 20c. a ton royalty for 16 years, the coal then unmined to be surveyed and paid for at the rate of 20c. a ton in lump. The Mahoning Coke Company failed and the lease was bought at sheriff's sale by John K. Ewing, who in turn sold it to the Cambria Iron Company, later merged into the Cambria Steel Company. Back payments for royalties for coal mined by the Cambria Iron Company and payment for 75 acres of unmined coal amounting to $47,663 are the claims.

Seaboard Coal Company.—Work has started on this company's new shaft near Greensburg. The company has 120 acres of coal land.

SOUTH DAKOTA.

Custer County.

(From Our Special Correspondent.)

Clara Belle Mining Company.—Frank Hebert, of Oreville, has organized this company with a capitalization of $1,000,000, par value $1 per share. The company will sink a new shaft and increase the capacity of the stamp mill. The officers are: President, Frank Hebert; vice-president, John C. Foster; secretary and treasurer, Charlie Hebert; all of Oreville.

Lawrence County.

(From Our Special Correspondent.)

American Mining Company.—This company is bonding additional mining ground in the Ragged Top District, adjoining the Spearfish Company's mine.

Boston-Deadwood Extraction Company.—This company, recently organized, is planning to erect a custom ore treating plant near Deadwood.

Central City Cyanide Plant.—Reilley & Barry, of Central City, are to start the enlarged cyanide plant formerly owned by the Dakota Mining Company.

Cleopatra Mining Company.—This company has closed down for a few days, to make the first repairs in the 100-ton cyanide plant, since it started 6 months ago. The last clean-up was the largest made in the plant.

Hidden Fortune Company.—H. J. Mayham, A. M. Stevenson, H. S. Shaw, Denver and New York men, are in Lead to select a site for the hoist in the North Lead District and for the stamp mill and cyanide plant at Belle Fourche. It is expected that work on the buildings will begin next month.

Portland Company.—The cyanide plant of this company is to be enlarged.

Wasp No. 2 Mining Company.—The owner of the Wasp No. 2 Mine, in the Yellow Creek District, south of Deadwood, have organized this company, capitalized at 500,000 shares, par value $1 per share. The incorporators are: John Gray, Terraville; John Blatchford, Terry; D. A. McPherson, C. W. Carpenter and W. L. McLaughlin, Deadwood. The company is operating a 50-ton cyanide plant.

Pennington County.

(From Our Special Correspondent.)

Black Hills Copper Company.—At the annual election at Deadwood the following officers were elected: President, John E. Barnes, Benton Harbor, Mich.; vice-president, T. L. Wilkinson, St. Joe, Mich.; treasurer, John Robinson, Benton Harbor, Mich.; secretary and general manager, Geo. M. Thresher, Benton Harbor, Mich. The other directors are: F. V. Eastman, Benton Harbor; H. Simonson, Robert Short and J. B. Taylor, Rochford, S. D. The company states that it has found 2 ledges of copper ore.

Gopher Mining Company.—A new ledge of ore is reported discovered by this company north of Hill City. The shaft on the Gopher ledge is down 170 ft.

New Placer Company.—J. C. Sherman, of Pactola, has returned from New York, where he interested capital in a placer project for a plant similar to the one that was worked last Fall by the Big Bend Company, of New York City. The new plant will be installed on Rapid River above Pactola. It is expected that the Big Bend Company wil be at work again soon.

UTAH.

Juab County.

(From Our Special Correspondent.)

Tintic Shipments.—During the week ending August 13th there was sent forward from the 3 rail points of this district 101 cars of ore and 3 bars of bullion, the latter from the Mammoth Mill. The several contributors to the ore shipments are as follows: Centennial-Eureka, 21; Bullion-Beck, 14; May Day, 3; Humbug, 2; Richmond & Anaconda, 1; Mammoth, 9; Grand Central, 20; Lower Mammoth, 4; Carissa, 10; Swansea, 6; South Swansea, 7; Tesora, 3; Morning Glory, 1.

Piute County.

Copper Belt Mining Company.—This company, with a capital stock of $125,000, divided into shares of the par value of 25c. each, has filed articles of incorporation with the Secretary of State. F. T. Talton is president; Saul Krotki, vice-president; Max Krotki, secretary and treasurer. These, with H. A. Weymouth and Lee H. Bartholomew, form the directorate. The company owns the Monitor group of claims in Ohio District.

Summit County.

(From Our Special Correspondent.)

Park City Shipments.—During the week ending April 13th there was marketed through the Macintosh Sampler 2,489,390 lbs. of ores and concentrates, representing the output of the camp. Following are the several contributors: Silver King, crude ore 1,433,770 lbs.; Daly-West, crude ore 463,180 lbs.; concentrates 386,170 lbs.; Anchor, concentrates 206,270 lbs.

WASHINGTON.

Ferry County—Republic.

(From Our Special Correspondent.)

Ben Hur.—Stoping continues on the 230-ft. level and the value of the ore is reported improving. About 50 tons have been hoisted. After 100 tons have been shipped to the Republic Mill, if the results are satisfactory, shipments will continue. A whim is employed for hoisting and bailing water.

Butte & Boston.—The upraise from the 260-ft. level is in 4 ft. of quartz that the superintendent says will average $34 in gold and 3 oz. in silver per ton.

California.—Sinking the incline shaft from the 200 to the 300-ft. level is going on under contract. A box chute is completed on the 200-ft. level for loading the skip. From 10 to 15 tons a day are shipped to the Granby Smelter, at Grand Forks, B. C.

Gold Ledge.—The tunnel is in 150 ft. An air compressor and power drills have been delivered.

Hawkeye.—J. L. Harper, superintendent of this claim at Belcher, reports shaft down 140 ft. A cross-cut driven 65 ft. east penetrated 3 ft. of good value ore in the hanging wall. A west cross-cut passed 30 ft. through granite and 10 ft. through trachyte and then 80 ft. through vein material and ore. The last 6 ft. was in ore having a quartz gangue, with its principal value in copper and next in silver. The value in gold is very small. The last assay returns ran from $7 to $68. A trial shipment of this ore will be sent immediately to the Granby Smelter at Grand Forks, B. C. The shaft will be continued to the 300-ft.

Lone Pine-Surprise.—The new tunnel is in 66 ft.

Princess Maud.—The south drift is in 62 ft. with values improving. The north drift is in 110 ft., the face showing rich streaks of sulphide ore. The superintendent reports the mine looking better than at any time during the past 10 months.

Tom Thumb.—At a recent meeting it was resolved to keep the pump going, but not work the mine until the ore is shipped. Distance from the mill and a bad road for teaming forbids shipping any quantity at present.

Trade Dollar.—The new 2-compartment shaft is down 30 ft. and is being timbered. For lagging, 2-in. plank is used. A whim is being installed for hoisting. The shaft will go down about 75 ft. in wash before striking rock.

WEST VIRGINIA.

Harrison County.

(From Our Special Correspondent.)

Erie Coal and Coke Company.—This new company, organized by G. H. Duncomb, of Meyersdale, Pa., will open a large body of coal land recently purchased near Clarksburg.

Quilp.—On the No. 3 level the ore has been stoped out for 50 ft., with ore still exposed. The upraise is up 68 ft., with about 60 ft. more needed to hole through on the No. 2 level. The average width of the stope is about 9 ft., the widest part being 13 ft. The richest ore makes in bunches and shows spots and stripes of silver glance. The ore is assorted underground into 2 grades, the higher going to the shipping bins and the lower to a separate dump for the advent of a railway for shipment to the smelters. The returns from the ore shipped to the Granby Smelter at Grand Forks, B. C., ran from $24 to $65 per ton, in the proportion of 12 to 16 oz. of silver to 1 oz. gold. Such ore is not suitable for cyanide treatment at the Republic Mill. The upper levels produce ore that runs much less in silver and can be profitably treated at home. Machine drills are used in the slopes. On the No. 3 level a drift has been run on the pay shoot 55 ft. On No. 4 level the vein has been located by a diamond drill and a crosscut started. The present working force consists of 11 men.

FOREIGN MINING NEWS.

AUSTRALASIA.

New South Wales.

The gold yield for February is reported at 19,380 oz. crude for the month of February. For the two months ending February 28th the total was 42,249 oz. crude, equal to 35,342 oz. fine gold, or $736,501.

Broken Hill Proprietary Company.—This company reports for the four weeks ending March 27th that the output of the refinery was 3,289 tons lead, 36 tons hard (antimonial) lead, 444,276 oz. silver and 771 oz. gold.

(From Our Special Correspondent.)

Yugilbar Quicksilver Mines.—In a recent issue of the "Engineering and Mining Journal" I noticed a reference to the cinnabar deposits at Yulgilbar, on the Clarence River. The statement that 1,000 tons of ore are at grass is erroneous, and also most of the other figures given. The find has been known for about 3 years, and is certainly the most important yet made of that metal in New South Wales; but it is not yet proved payable, and the people who have it are more concerned about the market than the ore. The greater part of last year no work was done, and only nine men are now at work. The larger lode is very poor at present, while the small one, which contains the rich ore, is too small to yield much metal. The ore contains a good deal of copper, with a little silver and gold. It is not yet proved that it will develop into a mercury mine of importance. Cinnabar is found in small quantities in many places in the Clarence River District, but nowhere so far in commercial quantity.

New Zealand.

The Mines Department reports the gold exported in January at 21,893 oz., against 38,289 oz. in January, 1900, showing a decrease of 16,396 oz. The silver exported was 33,076 oz., against 13,865 oz. last year; an increase of 19,211 oz. The gold exported in January last was equal to 19,707 oz. fine, or $407,335.

Queensland.

The Mines Department reports for February a gold output of 68,651 oz. crude, or 6,296 oz. less than in February, 1900. For the two months ending February 28th the total was 108,947 oz. crude, a decrease of 25,861 oz. from last year. The production this year was equal to 77,821 oz. fine gold, or $1,608,560.

(From Our Special Correspondent.)

Mount Morgan Gold Mining Company.—Concerning this great mine there does not appear to be anything fresh of importance to relate. The life of the mine is still assured for many years, 25 at the least, the developments of the past two years having proved large bodies of payable and high grade sulphides. The deep shaft which was being sunk has been stopped below the 650 level, and a report has been circulated that the ore had cut out at that depth. The stoppage is owing to the information gained about the trend of the ore shoots during recent work, and it is thought that very important discoveries may be made in consequence, but definite information on this point is not to be had at present. The usual work is going on and the second mundic works is nearing completion. The suspension owing to the drought was fortunately only temporary. The terrible drought Queensland has suffered for so long now seems to have broken up.

Victoria.

The Mines Department reports the gold output for January at 51,145 oz. crude, which compares with 37,983 oz. in January, 1900; an increase of 13,162 oz., or 34.6%, this year.

CANADA.

Northwest Territory.

The Governor-General-in-Council at Ottawa has passed an order granting the Gold Commissioner of the Yukon jurisdiction to hear and determine judicially disputes in regard to entries for mining claims. An appeal is allowed from the final judgment of the Gold Commissioner to the territorial court, and the Gold Commissioner will sit at the hearing of such appeals as a member having equal power with the judges until a third judge of the territorial court is appointed to be resident at Dawson; after which the commissioner's connection with the court of appeals is to cease. The order does not affect the jurisdiction of the Minister of the Interior with respect to appeals now pending, but the minister may, in case such appeals have not been disposed of by him, order a transfer made to the appeal court.

Ontario—Atikokan Range.

Atikokan.—Supt. Bradt and the men who have been working at the Atikokan Mine have returned to Port William bringing the drills and the machinery with them. Mr. Bradt states that the work has gone as far as is necessary at present and the option of the American Steel & Wire Company will close in a few days.

COAL TRADE REVIEW.

New York. Apr 19.

Anthracite.

The anthracite trade shows a certain feeling of uncertainty among buyers regarding the new price lists. With the gradual approach of warm weather buying naturally falls off. This has been the great obstacle to steady work at the collieries in the past and for many years the brightest minds in the trade have been seeking a remedy that should stimulate buying in the spring and early summer. The present graded discounts may prove a solution. Everything is in their favor except the natural disinclination of most people to buy coal ahead of current needs. So while admitting that the position of producers is stronger than ever before, dealers still show a disposition to wait. There is no doubt but that prices will be advanced 10c. June 1st, but what will happen should buying not be betteh in June and July than in past years? This

is the uncertain element in the situation. On the other hand, sales agents report buying as decidedly better than usual at this season and are unanimous in saying that come what may prices will go up 10c. per month until September.

Strikes at the collieries continue and the men show little regard for the published statements of the officials of the United Mine Workers. The strikes in many cases are for trivial causes, and evidently originate among the element hardest to control. The mines are working from ½ to 2/3 time. The companies are paying the 10% advance in wages given last fall, but such an advance is not appreciated now that work at the mines is falling off. If, as has been the case before, some companies should not work over 5 to 10 days a month in June doubtless there will be more trouble, though a general strike does not seem probable.

Trade in the West is light as yet. The strike of the marine engineers affects a large fleet of vessels and the movement of coal up the lakes waits for this to be settled. A freight rate of 40c. from Buffalo to Lake Michigan ports and Duluth seems probable. At lower lake points and in the East business is better. Retail buying at all points shows a decline, though a late spring makes the decline more gradual than was the case last year.

The April prices for free-burning white ash coal f. o. b. New York Harbor ports are: Broken, $3.50; egg, $3.75; stove and nut, $4.

Bituminous.

There is a little change for the better in the seaboard bituminous trade. The volume of business is increasing somewhat and more contracts for the coming year have been closed. The demand cannot be called brisk and trade is not expected to be really active for some weeks yet. It is worthy of note, however, that although the market is quiet, prices are well maintained and we hear of no variations from the standard f. o. b. tidewater shipping port prices except in a few cases governed by special conditions. All rumors of cut prices are found to have little or no foundation when investigated.

Trade in the far East continues dull, though contracts are taken from day to day. Along the Sound business is better. At New York Harbor a fair tonnage continues to be taken. The all-rail trade is, if anything, in better shape than it has been. There have been rumors of threatened strikes in the Clearfield Region, but representatives of the companies most interested say there is nothing in such reports. The chances of trouble in the Maryland and West Virginia fields are remote.

Transportation from mines to tidewater is fairly good. Car supply at the collieries is generally sufficient. In the coastwise vessel market a considerable number of vessels have arrived at the shipping ports and the supply of tonnage is up to the demand except for small craft. Coastwise freight rates are low and weak. We quote current rates from Philadelphia as follows: Providence, New Bedford and the Sound, 60c.; Boston, Salem and Portland, 70c.; Lynn and Wareham, 80c.; Portsmouth, 75c.

Clearfield coal is $2.65 f. o. b. New York Harbor ports; better grades are $2.85.

Birmingham, Ala. Apr. 15.

(From Our Special Correspondent.)

At present there are no labor troubles in the Alabama coalfields. The Alabama organization of the United Mine Workers will meet in Birmingham on June 17th to make a new contract for the ensuing wage year. The present scale is based on the selling price of pig iron and there are many miners who desire a different basis. Therefore, it is believed that the convention called for June 17th will be more important than has been believed. The miners have a strong organization in Alabama and are in better condition than ever before. The present wage is but 2½c. below the maximum price, 55c. At no time during the last 2 years has the rate been under 50c. per ton. The convention will have a good attendance. The operators will be invited to attend the convention after the miners have arranged the scale they will demand.

There are still rumors heard of the purchase by Pennsylvania operators of Alabama coal mines. The statement is also made that when the deeds are exchanged there will be no cessation of work at any of the Alabama mines, but that the product will be used in filling orders which have already been accepted by the Pennsylvania operators in the Mississippi River trade. The development of more coal lands in Jefferson County near Bessemer is reported. Col. T. H. Aldrich and W. P. Pinckard, who bought up some of the land, are now arranging a deal. The statement is made that the properties will be bought in by Pennsylvania operators. The property recently was thoroughly inspected by Col. L. W. Johns and other experts.

Cleveland, O. Apr. 17.

(From Our Special Correspondent.)

A meeting of the coal shippers has been held in this city within the week at which an agreement was entered to pay nothing more than 40c. a ton for the lake transportation of their material during the year. This action is taken to offset a similar one among the vessel owners which has for its purpose the maintenance through the year of a rate of 50c. a ton. The two pools will not clash before the first of next week, when the first charters on coal carrying may be made. Agents returning from the Northwest report that the consumers are still holding off on their contracts for the season and will not need coal for some time to come. It looks very much like a backward shipping season. The sales in this territory have been only moderately heavy.

Prices have not been changed. They are as follows, all quotations being f. o. b. Lake Erie ports: Pittsburg, 1¼ screened lump, $2.10; ¾ lump, $2.10; run-of-mine, $1.90. West Virginia, 1¼ screened lump, $2; ¾ lump, $1.90. Eastern Ohio, 1¼ screened lump, $1.90; ¾ lump, $1.80; run-of-mine, $1.70. Hocking Valley, 1¼ screened lump, $1.82½; lump, $1.77½; run-of-mine, $1.65.

Pittsburg. Apr 17.

(From Our Special Correspondent.)

Coal.—For the first time in the history of the Monongahela River coal trade coal is being disposed of as rapidly as it is mined. The Monongahela River Consolidated Coal and Coke Company is now mining about 1,000,000 bush. daily and during the past week has been sending two tows to down-river ports every day. The balance is consumed in the local markets. There are plenty of empty coal boats and barges and all the mines are being operated to their full capacity. The mines of the Pittsburg Coal Company, the railroad coal combination, are also in full operation. An occasional suspension, however, is necessary on account of a shortage of railroad cars. It has been decided by the two combinations to continue last year's prices for the present.

Connellsville Coke.—The only reason that coke prices are not advanced, it is said, is because practically all the coke being produced is under contract up to July 1st. Furnace coke is still quoted at $2 and foundry at $2.50. The production last week exceeded all previous weeks this year amounting to 234,184 tons, an increase of 4,655 tons. Of the 21,447 ovens in the region 19,938 were active and 1,509 were idle. The shipments for the week aggregated 11,140 cars, distributed as follows: To Pittsburg and river tipples, 3,432 cars; to points west of Pittsburg, 5,445 cars; to points east of Connellsville, 2,263 cars. This was a decrease of 316 cars compared with the shipments of the previous week.

Foreign Coal Ma kets.

The export coal market is quiet so far as European trade is concerned. In South American trade and that to the West Indies there is more activity.

In France coal prices are settling down slowly, as the demand for fuel for steam and metallurgical purposes shows a marked decrease. Shipments from this side continue to be made on contracts made last year, but the inquiries for new business are limited.

In Germany the decrease in demand has been less marked, but still sufficient to force reductions in prices from the coal syndicates. The German returns for 1900 show an increase in production, as compared with 1899, of 8,353,247 tons, or 8.2%, in coal, and of 6,074,666 tons, or 17.5%, in brown coal, or lignite.

Messrs. Hull, Blyth & Company, of London and Cardiff, report under date of April 4th that the advance in the values of all descriptions of coal has been maintained. Business is now stopping for the Easter holidays, although the miners are expected to work till Saturday. The following are the nominal prices for loading after Easter: Best Welsh steam coal, $4.20@$4.32; seconds, $4.08; thirds, $3.84; dry coals, $3.72@$3.84; best Monmouthshire, $3.72@$3.84; seconds, $3.36@$3.60; best small steam coal, $1.92@$2.04; seconds, $1.68@$1.80; other sorts, $1.44.

The above prices for Cardiff coals are all f. o. b. Cardiff, Penarth or Barry, while those for Monmouthshire descriptions are f. o. b. Newport, exclusive of wharfage, and are for cash in 30 days, less 2½% discount.

All the pressing orders for loading before the Easter holidays having been filled the freight market has become appreciably easier. Some rates noted from Cardiff are: Marseilles, $2; Genoa, $1.86; Naples, $1.92; Port Said, $2.04; Singapore, $3.72; Las Palmas, $1.68; St. Vincent, $1.86; Rio Janeiro, $3.48; Buenos Aires, $3.12.

CHEMICALS AND MINERALS.

(For further prices of chemicals, minerals and rare elements, see page 510.)

New York. Apr. 19.

Heavy Chemicals.—Some more future delivery contracts have been booked at quotations, while prompt shipments are moderate. Bleaching powder is still pressed for sale, and lower. Bicarb. soda is finding an improved foreign outlet at quotations.

We quote per 100 lbs. as follows: Domestic soda ash in bulk is worth 2½c. per 100 lbs. less than quotations below:

Articles.	Domestic.		Foreign.
	F.o.b. Works.	In New York.	In New York.
Alkali, 58%.	80@85	....	85@87½
" 48%.	85@90	....	.....
Caustic Soda, high test ...	$1.90@$1.95	....	1.85@1.87½
powd 60%.	... .	2.75	....
70@74%.	.....	2.85	....
98%.	....	3 25	3.75@4.00
Sal Soda 50		60	67½
" conc.	1.25@1.50	....	1.75
Bicarb Soda..	1.05@1.10	.....	1.37½@3.00
" " extra	3.25@3.50	.....	....
Bleach Pdr., Eng. prime..	.....	....	1.75@2.00
other brands.	.....	.....	1.50@1.62½
Chl. Pot. cryst	....	8.00@8.25	9.50@9.75
" powd.	....	8.25@8.50	9.75@10.00
.....	....	....	....

Prussiate of Soda.—Little demand resulted in weaker prices, and now sellers quote 11¾@12c. per lb.

Zinc Dust.—Fair exports are reported. On the whole, however, demand is small, and so quotations are lower at 6¾@7c. per lb.

Acids.—The export demand is growing, especially for muriatic and sulphuric acids and blue vitriol. Blue vitriol is lower.

Quotations as below are for large lots delivered in New York and vicinity, per 100 lbs. unless otherwise specified.

Acetic, No.8	$1.62½	Nitric, 36°	$3.87½
Blue Vitriol.	4.50@5.00	Nitric, 38°	4.12½
Aqua Fortis, 36°	3 62½	Nitric, 40°	4.37
Aqua Fortis, 38°	3 87½	Nitric, 42°	4.75
Aqua Fortis, 40°	4.12½	Oxalic	5.75@6.00
Aqua Fortis, 42°	4.50	Sulphuric, 66°	1.20
Muriatic, 18°	1.20	Sulphuric, 60°	1.05
Muriatic, 20°	1.35	" bulk 50° ton	14.00
Muriatic 22°	1.50		

Brimstone.—The recent heavy arrivals have about satisfied the consumptive demand, hence the market is again quiet. Spot best unmixed seconds are quoted at $21.50@$22, and shipments $21@$21.25. Thirds are $2 per ton less.

Pyrites.—There is no perceptible change in the market, as deliveries are steady on contract and prices are nominally unchanged. We quote per ton as follows: Mineral City, Va., lump ore, $4.90 per long ton, and fines $4.50. Charlemont, Mass., lump, $5.50 and fines $5. Spanish pyrites, 12c. per unit delivered ex-ship New York and other Atlantic ports. Spanish pyrites contain from 46@51% of sulphur; American from 42@44%.

Sulphate of Ammonia.—Gas liquor for shipment is worth $2.65 per 100 lbs., while prompt business is done at $2.69@$2.70.

Nitrate of Soda.—Very quiet and depressed, owing to the heavy deliveries in past 3 months, and the accumulation of store stocks. Quotations for all positions are $1.80@$1.82½ per 100 lbs. The European market is a little weak, as a result of heavy arrivals.

Concerning the Chilian nitrate of soda market we are advised by Messrs. Jackson Brothers, of Valparaiso, under date of March 9th, that it has continued dull throughout the past fortnight; only a few compulsory purchases to fill ready vessels taking place at former prices. There are some 100,000 qtls. of prompt 95% for sale for shipment previous to March 31st, which their producers would gladly dispose of at 6s. alongside, but the rate of freight of 26s. 3d. asked prevents any new combination; at the same time holders maintain their limit in hopes of securing same owing to the reduced quantity being offered; on the other hand, nitrate for shipment during the latter half of this month for April sailing is obtainable at 5s. 11d. steamer terms. For the refined quality there is no demand from the United States. The exports during February amounted to 1,847,000 qtls., making a total for the year of 4,490,000 qtls., as against 4,064,000 in 1900. The consumption of the world for the first two months of this year only reached 5,383,700 qtls., being a decrease of 1,345,800 qtls., as compared with 1900. We quote 95% March shipment, 5s. 11½d.; April, 5s. 10½d.; May-July, 5s. 10½d.; August-December, 5s. 11½d., and 96% May-June, 6s. ½d., all ordinary terms sellers. The price of 5s. 10½d. for 95%, with an all-round freight of 26s. 3d., stands in 7s. 10¼d. per cwt., net cost, and freight without purchasing commission. Reported sales for the fortnight ended March 9th amounted to 59,000 qtls., and resales, 22,000 qtls.

Phosphates.—In Florida stocks of high-grade rock are small, owing to the few plants that are producing. Pebble finds a good market and is well contracted for. The shipments of land pebble alone in the two months ended February 28th amounted to 31,904 tons domestic and 19,898 tons foreign, making a total of 51,802 tons, against 18,873 tons in the same time last year, showing an increase of 32,929 tons in 1901, owing chiefly to the larger home demand.

Tennessee rock is in better request, and prices are unchanged.

South Carolina rock is moving on contract to domestic consumers, chiefly.

Some Algerian rock has sold abroad for 1902 delivery on basis of quotations. In January and February the shipments from Bone amounted

to 35,116 tons, showing a slight increase over last year.

Phosphates.	Per Ton F. o. b.	C. i. f. Un'd Kingdom or European Ports.	
		Unit.	Long ton.
*Fla. hard rock (77@80%)	$6.50@7.00	7¼@7¾d	$11.31@12.09
*Fla. land pebble (68@73%)	3.85@4.00	6¼@6½d	8.75@9.10
*Fla. Peace River (58@63%)	2.50@2.75	6¼@6½d	7.50@7.80
†Tenn. rock 78%, export.	3.25@3.50	6¾@7d	10.53@10.92
†Tenn.....78% domestic.	3 00	.....	.....
†Tenn.....75% "	2.75	.....	.....
†Tenn.....70@72% "	2.00@2.50	.....	.....
‡So. Car. rock, crude....	2.50@2.75	.....	.....
§So. Car. rock, dried.....	3.25	6d	7.00
Algerian, rock...(63@70%	.....	6½@7d	8.71@9.38
Algerian, rock...(58@63%)	.....	6 @6½d	7.20@7.80
Tunis, Gafsa.....	.....	6 @6½d	7.20@7.80

* Fernandina, † Mt. Pleasant. ‡ At mines. § On vessels, Ashley River.

Liverpool. Apr. 3.

(Special Report of Joseph P. Brunner & Co.)

There is rather more doing in chemicals and a larger business is anticipated after the Easter holidays.

Soda ash is in fair demand. Quotations vary as to destination, but nearest range for tierces may be called about as follows: Leblanc ash, 48%, £4 15s.@£6; 58%, £6 2s. 6d.@£6 7s. 6d. per ton, net cash. Ammonia ash, 48%, £4 10s.@£4 15s.; 58%, £4 15s.@£5 per ton, net cash. Bags, 5s. per ton under prices for tierces. Soda crystals are in good domestic demand at £3 7s. 6d. per ton, less 5% for barrels, or 7s. less for bags, with special terms for certain favored markets. Caustic soda is in better demand and quotations are firmly maintained as follows: 60%, £9 5s.; 70%, £10 5s.; 74%, £10 15s.; 76%, £11@£11 5s. per ton, net cash.

Bleaching powder continues dull and inactive and for hardwood packages quotations are nominally about £7@£7 5s. per ton, net cash, with special quotations for certain favored markets.

Chlorate of potash is slow of sale at 3⅜@3½d. per pound, net cash.

Bicarb. soda is selling to a moderate extent at £6 15s. per ton, less 2½% for the finest quality in 1 cwt. kegs, with usual allowances for larger packages; also special terms for a few favored markets.

Sulphate of ammonia is quiet, but without change in value, £10 15s. per ton, less 2½%, bestill quoted by holders for good gray 24@25% in double bags, f. o. b. here.

Nitrate of soda is steady at £8 15s.@£8 17s. 6d. per ton less 2½% for double bags f. o. b. here, as to quality and quantity, and a moderate spot trade is passing.

Messina, Sicily. Apr. 1.

(Special Report of Emil Fog & Sons.)

Brimstone.—March elapsed uneventful, with the market in a settled condition. Prices for best unmixed seconds closed 6d. lower, while thirds are 3@6d. higher.

Shipments during the month were active, but being in fulfilment of previous sales, they did not impress the market. The Anglo-Sicilian Company's prices are maintained at 1s. to 1s. 6d. above the market rates.

Prices of refined and manufactured sulphur are slightly lower. It seems the Anglo-Sicilian Company will not continue refining for their account; they have been selling out their old stock. Raw brimstone at Catania not only maintained its value, but advanced; therefore, some of the smaller manufactories ceased working temporarily. The stock at Catania being about 20,000 tons short from last year, we may witness later on some advance in values of refined brimstone. Freights continue unusually low, whole steamers to New York or Baltimore being quoted 6s. 9d. ($1.62); Portland, 7s. 3d. ($1.74); Canadian ports, 8s. 6d.@9s. ($2.04@$2.16); Skien Drammen, 11s. ($2.64); Swedish ports, 9s. ($2.16). Several steamers are in search of a return freight. When these are placed we shall see higher freights.

Sulphur quotations, per ton, are as follows: Best unmixed seconds 78s. ($18.72); best thirds, 69s. 9d. ($16.74); refined block sulphur (100%), 82s. 6d. ($19.80); refined roll sulphur, in casks, 90s. ($21.60); sublimed flowers, extra pure, in bags, 98s. ($23.52); superior, 95s. 6d. ($22.80); current, 94s. ($22.56).

IRON MARKET REVIEW.

New York, Apr. 19, 1901.

Pig Iron Production and Furnaces in Blast.

Fuel used	Week ending Apr. 20, 1900. F'ces.	Tons.	Apr. 19, 1901. F'ces.	Tons.	From Jan., '00. Tons.	From Jan., '01 Tons.
An' racite & Coke.	260	283,350	225	289,325	4,521,852	4,214,113
Charcoal.	29	7,025	25	8,025	117,438	123,675
Totals..	289	290,375	250	297,350	4,639.290	4,337,788

The iron market has been comparatively quiet this week in all quarters, as is shown by our local letters which follow. The heavy buying is generally completed for the first half of the year, and as a rule only the smaller purchases are now in the market. The mills and furnaces are not pressing sales, as most of them are provided with work for some months to come. The only disturbing element just now is the trouble between the American Tin-plate Company and the Amalgamated Association. Some fear that this may lead to an extensive strike, the results of which it is hard to foresee.

Birmingham, Ala. Apr. 15.

(From Our Special Correspondent.)

Demand is steady, prices have not receded and shipments are regular. There are a number of inquiries being received. No concessions are reported and some of the furnaces have sold already into the second half of the year. There are still 2 or 3 furnaces ready to go into blast at any time, while 3 or 4 others will be ready in a few weeks to resume.

The report of the Southern Iron Committee for March shows shipments from Alabama and Tennessee of 144,823 tons of pig iron, an increase of 15,000 tons as compared with March, 1900. From the Birmingham District alone 80,587 tons were shipped, showing a decrease of 7,000 tons as compared with March, 1900. Export shipments from Alabama and Tennessee were 2,489 tons, a decrease of 5,000 tons as compared with March, 1900. Cast iron pipe shipments from Alabama and Tennessee were 13,172 tons, an increase over last year of 8,000 tons. From the Birmingham district alone cast iron pipe shipments amounted to 7,230 tons, an increase of 5,000 tons. Shipments of steel from the Ensley plant of the Tennessee Coal, Iron and Railroad Company were 5,437 tons. The shipments of cast

The quotations remain stiff. The following figures are given: No. 1 foundry, $11.75@$12.50; No. 2, $11.25@$11.75; No. 3, $10.50@$11.25; No. 4, $10@$10.50; gray forge, $10; No. 1 soft, $11.75@$12.50; No. 2, $11.25@$11.75.

In finished iron there is a healthy demand and the rolling mills are working steadily. The shipments of finished iron and steel are good and indications are that a fair demand will prevail for some time to come.

The steel plant at Ensley is still making a large quantity of steel. There are 6 of the open-hearth furnaces at the plant busy. The steel wire, rod and nail works adjacent are in full operation.

Buffalo. Apr. 10.

(Special Report of Rogers, Brown & Co.)

Sales of foundry iron have been light during the week, buyers in general simply covering for early requirements and not contracting ahead at the present time, awaiting the effect of the establishment of ore prices for the coming year. Lake Superior charcoal iron, however, is being bought at ruling prices. The stocks brought down last fall to lower lake ports for consumption during the winter have been entirely exhausted. Prices of both foundry and charcoal iron have been very firm. In some cases higher prices are being asked and obtained, particularly in charcoal iron. Shipments continue to tax the capacity of local furnaces, showing that consumption is keeping right up. We quote below on the cash basis f. o. b. cars Buffalo: No. 1 strong foundry coke iron, Lake Superior ore, $16; No. 2, $15.50; Southern soft, No. 1, $17; No. 2, $16.50; Lake Superior charcoal, $18; coke malleable, $16.50.

Cleveland, O. Apr. 17.

(From Our Special Correspondent.)

Iron Ore.—At the meeting of the independent vessel owners of the lakes in this city to-day an organization was perfected, the aim of which is to control the lake freights on ore. They have set themselves to hold the season's rate at 90c. a ton and to do so have effected a working agreement which entails the withdrawal from the market of a certain amount of tonnage at such times as the demand for boats shall warrant the action. This means that the supply of boats will continually be less than the demand for them. So far nothing has been done about making season's contracts or about making going charters on ore, the season being very backward, although navigation to Lake Michigan is now possible, the Straits being free from ice. The sales of ore have been heavy, something like 6,000,000 tons having been disposed of at the basing price of $4.25 on Bessemer and $3 on non-Bessemer ores.

Pig Iron.—The pig iron market is very quiet now. The small amount of iron to be disposed of makes large sales impossible. The outlook is for a good business for the second half of the year, as inquiries are already appearing. The prices remain as they have been, $16 for Bessemer; $15.50 for basic; $15 for foundry No. 1, and $14.50 for foundry No. 2 at Valley furnaces.

Finished Material.—The best business this week is being done in structural material. Bridge work is very heavy, demanding a large amount of structural shapes and also plates. Besides the building boom seems to have no end, two or three new business blocks being under contemplation, inquiries for the material for which have been heard on the market.

Bars have advanced in price also. The quotation is generally 1.60c., Pittsburg, on small orders, with some mills being willing to shade that on choice specifications. No one is willing to enter long-time contracts for much less than the price quoted. Some of the mills are now in shape to take orders on plates. This is attributed to a slowness on the part of the consumer in submitting their specifications rather than to a slump in the trade. The price has not changed from 1.60c., Pittsburg. Sales have been fairly large. The demand for billets is still very heavy and higher prices are being obtained. The best quotation has been $30 on Bessemer and $28 on open-hearth billets.

Old Irons.—A much better feeling exists in the scrap market, the prospects for an advance in prices being good. Material is hard to obtain and the dealers are being compelled in some instances to pay more for it. This promises an advance on the general market soon. At present the old prices obtain. They are: Wrought turnings, $10; cast borings, $6.50; car wheels, $19; steel rail, $16; iron rails, $21; cast No. 1, $13; wrought No. 1, $17.50.

Philadelphia, Pa. Apr. 18.

(From Our Special Correspondent.)

Pig Iron.—The pig iron market in this immediate neighborhood is quieter than for some time, but the general situation is in no wise changed. The mill people could get forge, especially of less than first-class brands, at a trifle off, for summer deliveries, but they are not anxious and prices stand where they have been for a month. Basic iron is particularly strong and an excellent authority says it will hold its own well.

Billets.—Billets have not changed during the week. Those who are qualified to talk would create the impression that billets have seen their highest limit and they furnish three or four apparently good reasons for thinking so.

Merchant Bar.—The store-keepers are weighing out a great deal of assorted lengths and sizes. Those who speak for the mills are predicting a steady demand. The top prices are still paid, especially for steel bars, for which there is good sale in large lots. The bar iron market is exceptionally strong and the Eastern mills are having all the Eastern territory to themselves—an exceptional condition. The mills on specialties are having all they can possibly do. Hardware manufacturers have bought a good deal of stuff lately.

Sheets.—Roofing stuff and corrugated material for building purposes gave the market something to think of this week. The oversold condition of mills is an assurance of steady prices. The threat to shut down sheet mills has made no impression as yet, though large consumers say that outcome would find them unprepared. The consumption has reached a very high limit.

Pipes and Tubes.—The strain on capacity in the West is reflected here, especially in tube work. Outside prices are quoted and the oversold condition is likely to continue.

Merchant Steel.—Since the combination the usual fluctuations which characterized dealings have practically disappeared. Buyers feel a sense of security in a steadiness of prices that keeps them out of the market until they need material. Inquiry indicates an enlarging consumption in vehicle and hardware lines and in large and small engineering plants.

Plate.—The shops using boiler material all over the Atlantic coast are very busy and when special accommodations are desired they have to be paid for. Outside of the small trade there is nothing beyond the fact that negotiations for several large lots aggregating over 3,000 tons appear to have come to a standstill. Quotations unchanged.

Structural Material.—The heavy demand on one hand and the powerful combination on the other have practically removed fluctuations from the market. There is reason to believe that the structural iron business will stay good.

Pittsburg. Apr. 17.

(From Our Special Correspondent.)

The iron and steel markets are not as active this week, but prices in all lines remain firm. There was a falling off in the sales of Bessemer pig iron, the total not exceeding 6,000 tons for delivery before July 1st, Valley furnaces. Business in gray forge has been unusually light. Foundry iron is also dull, but prices are a trifle firmer than last week, say 25c. a ton higher. Bessemer steel billets are still in great demand and a premium is offered for prompt delivery. From 4,000 to 5,000 tons were sold for shipment during the next month and June. A few sales were recorded at $25.50 for shipment this month. Open-hearth billets cannot be had. The market for structural material continues active and considerable new business has been placed during the week. But few new orders for steel bars were received this week, but the mills are all busy on old contracts that will not be filled for a month or two. The advance in the price of plates has not lessened the demand and there are now enough orders on hand to keep the mills in steady operation for several months.

A strike of the Union sheet mill workers will

prove serious to the sheet trade. At this writing there is every indication that the Amalgamated Association will order a general suspension of operations at all the union plants of the American Sheet Steel Company. The demand for black sheets is unusually heavy and the combination is pressed with orders. About 65% of its plants are operated under the scale of the Amalgamated Association and all will be closed if the strike order is issued as expected. The advisory board met this morning and discussed the proposition of President T. J. Shaffer to order a general strike. The trouble grew out of the discharge of a number of men at the W. Dewees Wood plant at McKeesport for joining the Amalgamated Association. This resulted in a strike and the mill was closed on Monday. According to the constitution of the Amalgamated Association the president can be given the authority to close all plants of a combine when trouble exists at any one of its plants. Secretary John Jarrett, of the labor bureau of the American Sheet Steel Company, appeared before the board and gave the company's side of the case. He is using every effort to avoid a general strike.

Pig Iron.—Sales of Bessemer pig iron this week amounted to about 6,000 tons at $16@$16.25, Valley furnaces. About 2,000 tons of foundry No. 2 were sold at $15.25@$15.50, Pittsburg, an advance of 25c. a ton over last week's quotations. But few sales of gray forge are recorded, but the price remains at $14.50@$14.75, Pittsburg.

Steel.—From 4,000 to 5,000 tons of Bessemer steel billets were sold during the week for delivery before July 1st at the pool price of $24, delivered at Pittsburg. Some sales for spot delivery were made at $25@$25.50. Open-hearth billets are still quoted at $30, but no sales was made. But little new business in steel bars was placed and the quotations have dropped to 1.45@1.50c. Tank plates are in good demand at the pool price of 1.60c.

Sheets.—The demand for black sheets is unprecedented and a strike of the union sheet workers will prove serious. No. 28 gauge is quoted at 3.30@3.35c. and galvanized sheets are strong at 70 and 5 to 70% off.

Ferro-manganese.—The heavy imports of the foreign product continues to affect the American manufacturers and the price of 80% domestic remains at $58.50.

New York. Apr. 19.

Pig Iron.—The local iron market shows a little more activity, though buying is confined mostly to small lots. We quote for Northern iron, tidewater delivery: No. 1 X foundry, $16.25@$16.75; No. 2 X, $15.50@$16; No. 2 plain, $14.75@$15; gray forge, $14.50@$14.75. For Southern irons on dock, New York, No. 1 foundry, $16@$16.50; No. 2, $15.50@$15.75; No. 3, $15@$15.25; No. 4, $13.75@$14.25; No. 1 soft, $16.25@$16.50; No. 2, $15.50@$15.75.

Bar Iron and Steel.—The demand is as good as for several weeks past, while prices are firm. We continue to quote common bars at 1.35c. for large lots on dock; refined bars, 1.45c.; soft steel bars, 1.50c.

Plates.—Mills are busy and prices are very firm. We quote for large lots at tidewater: Tank, ¼-in. and heavier, 1.78c.; flange, 1.88c.; marine, 1.98c.; universals, 1.78c.

Steel Rails and Rail Fastenings.—These have no purchases of note in the domestic market. Standard sections are still quoted at $26 at Eastern mills; light rails at $26@$30, according to weight. Spikes are 1.60c.; splice bars, 1.40c.; bolts, 2.10@2.25c.

Structural Material.—Business continues active, with prices unchanged. We quote for large lots at tidewater as follows: Beams, 1.75c.; channels, 1.75c.; tees, 1.80c.; angles, 1.75c.

METAL MARKET.

New York. **Apr. 19.**

Gold and Silver.

Gold and Silver Exports and Imports
At all United States ports in March and year.

Metal.	February.		Year.	
	1900.	1901.	1900.	1901.
GOLD.				
Exports	$1,081,280	$490,269	$8,176,228	$9,129,040
Imports	1,921,036	2,487,019	5,824,344	8,478,305
Excess	I. $839,756	I. $1,996,750	E. $2,351,384	E. $650,735
SILVER.				
Exports	5,452,422	5,150,186	15,004,465	14,520,924
Imports	3,149,146	2,731,733	8,164,752	8,730,694
Excess	E. $2,303,276	E. $2,418,453	E. $6,839,713	E. $5,790,230

These figures include the exports and imports at all United States ports, and are furnished by the Bureau of Statistics of the Treasury Department.

Gold and Silver Exports and Imports, New York

For the week ending April 18th, 1901, and for years from January 1st, 1901, 1900, 1899 and 1898.

Period.	Gold.		Silver.		Total Excess, Exp. or Imp.
	Exports.	Imports.	Exports.	Imports.	
We'k	.....	$27,670	$727,803	$41,063	E. $659,670
1901..	10,818,269	870,054	11,240,138	1,231,218	E. 19,957,135
1900..	2,985,134	1,201,623	11,777,973	1,313,578	E. 12 247,906
1899..	1,572,767	5,277,406	8,816,923	957,475	E. 4,154,809
1898..	1,416,334	50,058,402	11,377,524	1,474,088	I. 35,738,622

There were no exports of gold this week; the imports were from the West Indies. The silver exported went chiefly to London; that imported was from Mexico and South America.

The United States Assay Office in New York reports the total receipts of silver at 96,000 oz. for the week. This makes a total of 1,149,000 oz. from January 1st.

Average Prices of Silver per oz. Troy.

Month.	1901.		1900.		1899.	
	Lond'n Pence.	N. Y. Cents.	Lond'n Pence.	N. Y. Cents.	Lond'n Pence.	N. Y. Cents.
January...	28.97	63.12	27.30	59.30	27.42	59.36
February..	28.13	61.06	27.49	59 76	27.44	59.42
March.....	27.94	60.63	27.59	59.81	27.48	59.64
April.....	.....	.....	27.41	59.59	27.65	60.10
May.....	.....	.....	27.56	59.96	28.15	61.23
June.....	.....	.....	27.81	60.42	27.77	60 43
July.....	.....	.....	28.23	61.25	27.71	60 26
August....	.....	.....	28.13	61.14	27.62	60.00
September	.....	.....	28.85	62.63	27.15	58.89
October ..	.....	.....	29.58	63.83	26.70	57.98
November	.....	.....	29.66	64.04	27 02	58.67
December.	.....	.....	29.68	64.14	27.21	58.99
Year....	.....	.....	28.17	61.41	27.44	59.58

The New York prices are per fine ounce; the London quotation is per standard ounce, .925 fine.

Average Prices of Metals per lb., New York.

Month.	COPPER.		TIN.		LEAD.		SPELTER.	
	1901.	1900.	1901.	1900.	1901.	1900.	1901	1900.
Jan.....	16.25	15.58	26.51	27.07	4.35	4.68	4.13	4.65
Feb.....	16.38	15.78	26.68	30.58	4.35	4.675	4.01	4.64
March...	16.42	16.29	26.03	32.90	4.35	4.675	3.92	4.60
April....	.....	16.76	.....	30.90	.....	4.675	.....	4.71
May.....	.....	16.34	.....	29.37	.....	4.181	.....	4.53
June.....	.....	15.75	.....	30.50	.....	3.901	.....	4.29
July.....	.....	15.97	.....	33.10	.....	4.030	.....	4.28
August..	.....	16.35	.....	31.28	.....	4.250	.....	4.17
Sept.....	.....	16.44	.....	29.42	.....	4.350	.....	4.11
October..	.....	16.37	.....	28.54	.....	4.350	.....	4.15
Nov.....	.....	16.40	.....	28.25	.....	4.350	.....	4.29
Dec.....	.....	16.31	.....	26.94	.....	4.350	.....	4.25
Year....	.....	16.19	.....	29.90	.....	4.37	.....	4.59

The prices given in the table for copper are the averages for electrolytic copper. The average price for Lake copper for the year 1900 was 16.52c.; for the month of January, 1901, it was 16.77c.; for February, 16.90c; for March, 16.94c.

Prices of Foreign Coins.

	Bid.	Asked.
Mexican dollars	$ .48	$ .50½
Peruvian soles and Chilean pesos	.42½	.46½
Victoria sovereigns	4.85	4.88
Twenty francs	3.84	3.88
Twenty marks	4.75	4.80
Spanish 25 pesetas	4.78	4.82

Financial Notes of the Week.

While there is little change in general business, the chief point to be noted this week is the extremely active speculation. The excitement in the industrial and other stocks is running away with all prudence. The higher rates of money which now prevail seem to have no effect in checking this movement.

Low prices not having brought out silver, demand has increased at rising figures, and although the market at to-day's figures—27⅜d.—is quoted uncertain. A return to 27d. does not at present seem probable.

The statement of the United States Treasury on Wednesday, April 17th, shows balances in excess of outstanding certificates as below, compared with the corresponding day last week:

	Apr. 10.	Apr. 17.	Changes.
Gold	$100,137,844	$98,133,107	D. $2,004,737
Silver	16,943,740	17 320 365	I. 376,625
Legal tenders	9,893,741	9,076,213	D. 817,528
Treas. notes, etc..	91,683	153,837	I. 62,154
Totals	$127,067,008	$124,683,522	D. $2,383,486

Treasury deposits with national banks amounted to $99,560,863, showing a decrease of $4,349,180 as compared with the corresponding day last week.

The statement of the New York banks—including the 63 banks represented in the Clearing House—for the week ending April 13th give the following totals, comparison being made with the corresponding week in 1900 and 1899:

	1899.	1900.	1901.
Loans and discounts.	$768,354,200	$761,672,400	$890,956,000
Deposits	888,478,800	834 328,800	969,289 200
Circulation	13,948,300	21,029,800	31,479,000
Reserve:			
Specie	188,134,900	157 243,500	180,612,100
Legal tenders	53,456,200	62,288,900	69,618,400
Total reserve	$241,591,100	$219,532,400	$250,230,500
Legal requirements .	222,119,575	208,582,125	242,322,300
Balance, surplus....	$19,471,525	$10,950,275	$7,938,200

Changes for the week, this year, were increases of $215,600 in legal tenders, and $2,120,225

Imports and Exports of Metals.

Port.	Week, Apr. 17.		Year 1901.	
	Expts.	Impts.	Expts	Impts
New York. (N. Y. Metal Exchange.)				
Aluminum.....long tons	.....	5	41	35
Antimony ore... " "	.....	....	.....	188
" regulus.. " "	.....	90	19	392
Copper, fine..... " "	613	443	18,107	4,959
" matte.. " "	178	.....	812	30
" ore..... " "	.....	.....	.....	13,390
" ash..... " "	.....	.....	.....	.....
Iron ore ..... " "	.....	.....	.....	75
" pig, bar, rod " "	198	148	7,283	857
" plates, sheets " "	.....	.....	221	.....
Lead ..... " "	2,650	1,270	27,347	17,310
" ore.. ..... " "	.....	.....	.....	.....
Manganese, ore. " "	.....	.....	100	3,680
Metals, old, scrap " "	354	46	1,115	720
Composition... " "	.....	.....	3,193	.....
Nails. ..... " "	284	.....	3,474	.....
Nickel ..... " "	75	3	671	32
" ore, matte " "	.....	.....	.....	13,295
Pipe, iron & steel " "	201	.....	6,298	.....
Railr'd material. " "	327	237	8,561	882
Rails, old..... " "	.....	.....	.....	.....
Steel bars, plates " "	783	462	22,585	4,160
" rails..... " "	4,388	.....	28 973	.....
" wire..... " "	448	.....	9,891	.....
Tin ..... " "	.....	700	230	8,007
" and black plates " "	.....	670	.....	7,994
" dross..... " "	.....	.....	.....	.....
Zinc..... " "	.....	30	487	583
" dross..... " "	.....	.....	128	.....
" ashes, skim " "	13	.....	308	.....
" ore..... " "	.....	.....	6,156	.....
Baltimore. (Special Correspondence).				
Antimony.....long tons	.....	.....	.....	10
Chrome Ore ..... " "	.....	.....	.....	301
Copper, fine ..... " "	929	181	7,622	1,904
Iron pig, bar, etc. " "	.....	5	1,218	1,962
" ore..... " "	.....	7,665	.....	85,998
Manganese ore.. " "	.....	4,100	.....	15,984
Nails ..... " "	.....	.....	306	.....
Pipe, iron & steel " "	20	.....	801	.....
Spiegeleisen..... " "	.....	.....	.....	424
Steel, bars, etc.. " "	623	.....	30,794	72
" wire ..... " "	.....	.....	618	71
" rails..... " "	4,085	.....	35,688	.....
Tin..... " "	.....	.....	.....	175
" and blackplates " "	.....	.....	.....	133
Philadelphia.				
Chrome ore.....long tons	.....	.....	.....	195
Copper, fine..... " "	.....	.....	523	.....
" ore..... " "	.....	.....	.....	10,385
Iron, pig, bar.... " "	.....	.....	212	2,120
" ore..... " "	.....	4,000	.....	64,670
" pipe ..... " "	500	.....	1,380	.....
Lead..... " "	.....	.....	200	.....
Manganese ore.. " "	.....	.....	.....	3,275
Metals, old..... " "	.....	.....	29	701
Nails ..... " "	.....	.....	87	.....
Pipe, iron & steel " "	.....	.....	500	.....
Railroad material " "	.....	.....	175	.....
Steel, bars, etc.. " "	.....	.....	4,102	.....
" rails..... " "	.....	.....	3,776	.....
" wire ..... " "	38	.....	223	.....
Tin ..... " "	.....	25	.....	190
" and black plates " "	.....	109	.....	175
Zinc ore..... " "	.....	.....	2,064	.....
" dross ..... " "	.....	.....	100	.....
" ash .... " "	.....	.....	32	.....

Total United States.

Articles.	February.		Year., 1901.	
	Expts.	Impts.	Expts.	Impts.
Antimony.....long tons	.....	159	.....	330
" ore... " "	19	102	21	119
Copper, in all forms..... " "	6,453	4,510	16,456	12,490
Iron, pig & bar.. " "	11,310	3,092	36,032	5,368
" ore..... " "	402	39,375	812	72,728
Iron & steel plates " "	3,978	120	9,213	308
Iron & steel rails " "	23,801	1	42,397	117
" " wire " "	5,279	126	11,618	954
Lead, in all forms " "	7,825	7,909	18,206	23,421
Manganese ore and oxide..... " "	.....	472	.....	9,281
Nickel " & matte " "	134	3,588	374	3,600
Nails, cut..... " "	331	.....	3,498	.....
" wire..... " "	1,357	.....	3,050	.....
Quicksilver..... " "	41	.....	65	.....
Steel, billets, rods, etc..... " "	11,790	2,140	20,777	3,381
Tin..... " "	324	2,461	376	5,777
" & black plates " "	260	6,256	361	10,851
Zinc..... " "	641	1	691	130
" ore..... " "	4,110	.....	7,171	.....

Import Duties on Metals.

The duties on metals under the present tariff law are as follows: Antimony, metal or regulus, ¾c. a lb. Lead, 1¼c. a lb. on lead in ores; 2½c. per lb. on pigs, bars, etc.; 2½c. on sheet, pipe and manufactured forms. Nickel, 6c. per lb. Quicksilver, 7c. per lb. Spelter or zinc, 1½c. per lb. on pigs and bars, 2c. on sheets, etc. Copper, tin and platinum are free of duty.

in surplus reserve; decreases of $16,492,100 in deposits, $302,700 in circulation, $13,484,600 in loans and discounts, and $2,218,400 in specie.

The following table shows the specie holdings of the leading banks of the world at the latest dates covered by their reports. The amounts are reduced to dollars and comparison is made with the holdings at the corresponding date last year:

Banks.	1900. Gold.	1900. Silver.	1901. Gold.	1901. Silver.
N.Y. Ass'd..	$157,243,500	.....	$180,642,100	.....
England....	160,921,505	.....	169,103,395	.....
France.. ...	388,064,495	$226,253,800	482 150.545	$219,111,340
Germany....	127,460,000	65,660,000	130,920,000	67.440,000
Spain..	68,445,000	77,920,000	70,010,000	82,630,000
Neth'l'ds....	24,360,000	29,670,000	25,285,500	27.972,000
Belgium....	14,920,000	7,250,000	15 160,000	7,580,000
Italy.....	77,130,000	8,005,000	76 025,000	9,654,500
Russia.....	418,255,000	33,945,000	371,995,000	34 675,000

The returns of the Associated Banks of New York are of date of April 13th and the others are of date of April 12th, as reported by the "Commercial and Financial Chronicle" cable. The New York banks do not report silver separately, but the specie carried is chiefly gold. The Bank of England reports gold only.

The summary of the United States Treasury statement of April 16th shows that the Government's aggregate gold holdings, for the first time in history, have passed the half-billion-dollar mark. The exact total was $500,278,506, of which $252,078,959 was held against certificates in the hands of the outside public and $150,000,000 as a reserve against outstanding United States notes; the balance being free assets. This is the largest amount of gold now held in the world, and it is the largest ever held by any institution, with one exception—the Imperial Bank of Russia, which in February, 1898, raised its total holdings to $590,300,000. At present, however, the Russian Bank holds only $371,500,000. The Bank of France now holds $472,271,000, its high record being $479,244,000, on the 4th of this month. The Bank of England holds $169,100,009 gold, and the high record of its history was $245,500,000, in February, 1896. Present gold holdings of the Imperial Bank of Germany are $130,000,000. The United States Treasury's gross gold holdings have increased $76,439,000 within the past 12 months.

Exports of merchandise from the United States in March were valued at $124,975,744, this amount being $12,018,730 more than in February, but $9,181,481 less than in March, 1900. For the nine months of the fiscal year from July 1st to March 31st the statement of the Bureau of Statistics is as follows:

	1900.	1901.
Exports	$1,053,630,696	$1,140,170,728
Imports	641,776,030	599,483,391
Excess, exports	$411,854,666	$540,687,337
Add excess of exports, silver		21,009,057
Total		$561,696,394
Deduct excess of imports, gold		25,912,945
Apparent balance		$535,783,449

The gold and silver movement in detail will be found in the usual tables, at the head of this column.

Exports of specie by water from San Francisco in March included $451,459 silver and $53,498 gold; a total of $504,957. For the three months ending March 31st the shipments were as follows:

	Gold.	Silver.	Totals.
Hongkong	$8,832	$785,367	$794,199
India	.....	30,000	30,000
Central America	720	.....	720
Total foreign	$9,552	$815,367	$824,919
New York	535,091	126,562	661,653
Totals	$544,643	$941,929	$1,486,572
Totals, 1900	2,295,249	3,633,871	5,929,120

The large decrease this year was due chiefly to the almost complete paralysis of the trade with China. The silver shipments this year included $75,209 in Mexican dollars in March and $282,842 in those coins for the three months, these figures comparing with $648,937 and $1,389,333 for the corresponding periods last year.

Shipments of silver from London to the East for the year up to April 3d, 1901, are reported by Messrs. Pixley & Abell's circular as follows:

	1900.	1901.	Changes.
India	£1,5 9,062	£2,3:6,210	I. £877,148
China	265,324	212,375	D. 52.949
The Straits	66,526	48,976	D. 17,5 0
Totals	£1,840 912	£2,647,561	I. £806,619

Arrivals for the week, this year, were £81,000 in bar silver from New York, and £2,000 from Australia; total, £83,000. Shipments were £102,000 in bar silver to Shanghai, and £47,710 to Bombay; total, £150,210.

Indian exchange is steady at 15.91d. per rupee, though the demand for Council bills in London has been light. Exports from India have not been heavy, and the demand for money there is moderate. Little or no silver is being shipped at present.

Other Metals.

Daily Prices of Metals in New York.

April.	Sterling Exchange.	Silver. Fine oz. Cts.	Silver. London, Pence.	Copper. Lake, cts. ₱ lb.	Copper. Electrolytic ₱ lb.	Copper. London, £ ₱ ton.	Tin, cts. ₱ lb.	Lead, cts. ₱ lb.	Spelter. N. Y. cts.. ₱ lb.	Spelter. St. L. cts. ₱ lb.
13	4.87¾	59	27⅛	16⅞ @17	16.35 @16 45	....	25¾	4.32½ @4.37½	3.92½	3.77½
15	4.87⅞	59	27⅛	16⅞ @17	16.35 @16.45	70½	25¾	4.32½ @4.37½	3.92½	3.77½
16	4.87¾	58⅞	27⅛	16⅞ @17	16.40 @16.50	70¾	26¼	4.32½ @4.37½	3.95	3.80
17	4.87¾	59⅛	27⅛	16⅞ @17	16.40 @16.50	70⅝	26⅜	4.32½ @4.37½	4.00	3.82½
18	4.87¾	59½	27⅜	16⅞ @17	16.40 @16 50	70½	26¼	4.32½ @4.37½	4.00	3.82½
19	4.87¾	59½	27⅜	16⅞ @17	16.40 @16.50	70	26	4.32½ @4.37½	4.00	3.82½

London quotations are per long ton (2,240 lbs.) standard copper which is now the equivalent of the former g. m b's. The New York quotations for electrolytic copper are for cakes, ingots or wirebars; the price of electrolytic cathodes is usually 0.25c. lower than these figures.

Copper has again developed considerable strength. There has been a good inquiry from home consumers, as well as from abroad. We quote Lake copper at 16⅞@17c.; electrolytic in cakes, wirebars and ingots at 16.40@16.50c., in cathodes at 16.15@16.25c.; casting copper nominally at 16⅜c.

Reports from Europe are of a more encouraging nature. The market for standard copper opened on Monday at £70 2s. 6d., advanced on Tuesday to £70 15s., but reacted again, and the closing quotations are cabled as £70@£70 2s. 6d. for spot and 10s. higher for three months.

Statistics for the first half of April show a decrease in the visible supplies of 1,000 tons.

Refined and manufactured sorts we quote: English tough, £73@£73 10s.; best selected, £75 @£75 10s.; strong sheets, £84@£84 5s.; India sheets, £81@£81 5s.; yellow metal, 6½@6⅝d.

Copper production, as reported by Mr. John Stanton, who acts as statistician for the producing companies, was as follows, for March and the three months ending March 31st, stated in long tons (2,240 lbs.) of fine copper:

	March. 1900.	March. 1901.	3 months. 1900.	3 months. 1901.
U. S., Reporting mines	19,883	19,984	54,993	56,963
U. S., outside sources	3,400	3,400	10,200	10,200
Total, U. S.	23,283	23,384	65,193	67,163
Foreign, reporting mines	7,544	7,817	20,653	21,059
Totals	30,827	31,201	85,846	88,222
Exports, U. S.	20,148	6,818	46,882	23,274

The United States production in March showed an increase of 2,284 tons over that reported in February, but was only 103 tons greater than that for March, 1900. For the three months the increase was 1,970 tons, or 3.0%. The foreign production for the three months showed a slight gain—406 tons, or 1.9%. Exports from the United States this year have been very light, the falling off, as compared with 1900, having been 23,608 tons, or 50.3. No less than 13,300 tons of this reduction was in March.

Tin has been quite active throughout the week. However, the higher prices which were established during the first few days could not be maintained, and at the close Straits tin for prompt shipment is selling at 26c., futures at 25½@25¾c.

The foreign market opened on Monday at £115 5s., advanced sharply on Tuesday to £117 10s., and the closing quotations are cabled as £116 2s. 6d.@£116 5s. for spot and £1 15s. lower for three months.

Exports of tin from the Straits Settlements for the 2 months ending February 28th were as follows, in tons of 2,240 lbs.:

	1899.	1900.	1901.
United States	5,325	3,613	3,151
Europe	2,925	3,385	4,568
India and China	28	341	762
Totals	8,278	7,339	8,481

The total this year shows an increase of 1,142 tons over the corresponding period last year, and of 203 tons over 1899.

Lead is without any special feature. Demand continues fair. The ruling quotations are unchanged at 4.20@4.32½c. St. Louis, 4.32½@4.37½c. New York.

The foreign market is steady, the closing quotations being cabled as £12 2s. 6d.@£12 5s. for Spanish lead, £12 5s.@£12 7s. 6d. for English lead. There is a somewhat better demand from abroad.

St. Louis Lead Market.—The John Wahl Commission Company telegraphs us as follows: Nothing new in pig lead; 4.22½c. continues to be the price for chemical and soft Missouri and argentiferous is still unobtainable below 4.32½c. Trading is rather light.

Spelter.—The market has displayed considerable activity, and prices have stiffened. Fair quantities have changed hands, galvanizers as well as brass manufacturers buying freely. The ruling quotations are 3.80@3.82½c. St. Louis, 3.95@4c. New York.

The foreign market is strong and advancing, good ordinaries being quoted at £17, specials at £17 5s.

Antimony is quiet, but steady, with quotations unchanged at 10@10¼c. for Cookson's; 8¾@9c. for Hallett's; 8⅝@8¾c. for Italian, Hungarian, Japanese and U. S. Star.

Nickel.—The price continues firm at 50@60c. per lb., according to size and terms of orders.

Platinum.—Consumption continues good and prices are strong. For ingot platinum in large quantities $18.20 per Troy oz. is quoted in New York. In London a recent quotation gives 75s. per ounce, unmanufactured, and 77s. 6d.@80s. for crucibles, etc. This is very nearly on a parity with New York prices.

Chemical ware (crucibles and dishes), best hammered metal from store in large quantities, is worth 72c. per gram.

Quicksilver.—While the nominal quotation is still $51 in New York, the metal can be had for $48.75@$50 per flask in large quantities, with a slightly higher rate named for small orders. San Francisco prices are the same as last week, $46.50@$47 per flask being named for domestic orders and $42@$42.50 for export. The London price continues nominally £9 2s. 6d. per flask.

Minor Metals and Alloys.—Wholesale prices, f. o. b. works, are as follows:

Aluminum.	Per lb.		Per lb
No. 1, 99% ingots	33@37c.	Ferro-Titanium (25%)	$1 00
No. 2, 90% ingots	31@34c.	Ferro tungsten (37½)	.22c.
Rolled sheets	42c. up	Magnesium	$2.75@3
Alum.-bronze	20@23c.	Manganese (over 99%)	$1.00
Nickel-alum	33@39c	Mangan'e Cop (20% Mn)	.32c.
Bismuth	$2.05	Mangan'e Cop (30% Mn)	.38c.
Chromium (over 99%)	1.00	Molybdenum (Best)	$1.45
Copper red oxide	50c.	Phosphorus	5'c.
Ferro-Molyb'um (50%)	$1.00	American	70c.
Ferro-Titanium (10%)	90c.	Tungsten (Best)	.78c.

Variations in prices depend chiefly on the size of the order.

LATE NEWS.

St. Francois County, Missouri.

(From Our Special Correspondent.)

Surveys are completed for the new railroad that is to enter the disseminated lead belt direct from the Southern Illinois coal-fields by crossing the Mississippi River at St. Genevieve. An excellent line has been secured that gives easy curves and low grades, and a first-class road is to be built.

Anaconda Lead Company.—This is the latest company organized in this district to operate on a tract adjoining the Elizabeth Lead Company on Big River. It is capitalized at $1,000,000 and has a total acreage of about 600 acres in 5 different tracts.

Grand County, Utah.

(From Our Special Correspondent.)

The Colorado Grand Development Company.—This company filed incorporation articles with the Secretary of State at Denver, Colo., April 17th. Capitalization, $125,000, in shares of $1; principal office is at Denver; Colonel D. C. Dodge is president; E. T. Wolverton, vice-president, and these, with W. M. Ingersoll, compose the directorate. George B. Dodge is treasurer-secretary, who, with the directors and E. T. Bradford, are all the shareowners; making a close corporation. The realty embraces some 1,120 acres, containing what is reported to be a large body of manganese ore situated 12 miles south of Little Grand siding on the Rio Grande Western, 6 miles east of Green River station in Utah. The discovery of this was made by Mr. Wolverton and S. O. Huestis, of Nova Scotia, in November last while on their way from Colorado to Arizona, near Green River. Mr. Wolverton's attention was drawn to the ore, which covers the ground. He sent samples to the Illinois Steel Company, the Colorado Fuel and Iron Company and to New York, in each instance he says he received returns that it was valuable, if there was any quantity of it. Through Messrs. Bradford and Ingersoll Mr. Wolverton met Colonel Dodge, vice-president and general manager of the Rio Grande Western, and a car-load of 60,000 lbs. was shipped to the Colorado Fuel and Iron Company, a partial analysis of which is said to show: Phosphorus, 0.11%; silica, 4.35%; lime, 12.21%; manganese, 42.65%. This ore was picked right from the outcrop without any attempt at sorting. Mr. Wolverton has estimated 26,000 tons on the ground. The ore is a quite pure pyrolusite. Mr. Wolverton avers that the source of the ore is a mammoth-bedded vein with an andesite foot wall and a metamorphic sandstone, or semi-quartzite hanging wall, having a dip of 8° to 10° east of north, which he has traced for 2 miles. His theory is that the enveloping rock has disintegrated by weather leaving the pyrolusite as a natural concentrate scattered over the surface. The discovery has occasioned a lively sensation and given rise to some wild reports. Shipments are being made to the Illinois Steel Company and to New York.

SLATE TRADE REVIEW.

New York. Apr. 19.

The list of prices per square for No. 1 slate standard brand f. o. b. at quarries in car-load lots, is given below:

Size, inches	Monson or Br'nville.	Bangor.	Bangor Ribbon.	Alb'n, or Jackson Bangor.	Chap'n Key's'ne	Peach Bottom.	Sea Gr'n.	Unfad'g Green.	Red
	$	$	$	$	$	$	$	$	$
24 x 14	6.50	3.50	3.00	3.00	..	5.10	3.00		....
24 x 12	6.60	3.50	3.00	3.00	3.80	5.25	3.00	3.75	.....
22 x 12	6.60	3.50	3.25	3.00	... .	5.25	3.00	3.75	....
22 x 11	6.50	3.75	3.25	3.00	4.00	5.25	3.00	4.00	....
20 x 12	6 90	3.75	.....	3 00	.. .	5.25	3.00	3.75	.....
20 x 11	6.80	.....	.....	3.25	....	5.25	3.00	.....	.....
20 x 10	6.80	4.25	3.50	3.25	4.00	5.35	3.00	4.25	10.50
18 x 12	6.80	3.75	....	3.00	.....	5.25	3.00	3.50	. ....
18 x 11	7.00	....	.	.....	.....	...	3.00	3.75	.....
18 x 10	7.00	4.25	3.50	3.25	4.00	5.35	3.00	4.00	10.50
18 x 9	7.00	4.50	3.50	3.25	4.00	5.35	3.00	4.25	10.50
16 x 12	6.80	3.75		3.00	.....	.....	2.90	3.50	....
16 x 10	7.00	4.00	3.50	3.25	4.00	5 25	2.90	4.00	10.50
16 x 9	7.00	4.25	.....	3 25	4 00	5.35	2.90	4.25	10.50
16 x 8	7.00	4.50	3.50	3.25	4.25	5.35	2.90	4 25	10.50
14 x 10	6 60	3.75	3.25	3.00	.....	5 25	2.70	3.75	10.50
14 x 9	6.50	.....	.....	.....	.....	....	2.70	3.75	10.50
14 x 8	6 60	3.75	3.25	3.00	4.00	5.10	2.70	4.25	10.50
14 x 7	6.40	3.75	3.25	3.00	3.75	5.10	2.50	4.25	10.50
12 x 10	5.75	....	.	....	. .	...	2.50	3.25	....
12 x 9	5.60	.....	.....	....	... .	....	2.50	3.25	.....
12 x 8	5.50	3.50	.....	2.85	.....	4 85	2.50	3.50	9.00
12 x 7	5.00	3.25	.....	2.85	3 25	4.85	2.00	3.50	9.00
12 x 6	4.80	3 25	.	2 85	3.25	4.75	2.00	3.50	8.50

A square of slate is 100 sq ft as laid on the roof.

In the first quarter this year the Pennsylvania quarrymen have shipped more slate than in the same time last year, owing in part to the increased exports in January. In Vermont trade is good, and owing to the mild winter quarries have worked more regularly than a year ago.

Roofing slate orders are showing up better, though building operations are still restricted. Mill stock is quiet, and the blackboard people are not working harmoniously together. The Pen Argyl and Lehigh board makers, who organized the American Slate Blackboard Company in 1895 with $100,000 capital stock, have appointed a receiver for this concern. Of late there has been increased competition with imitation blackboards, and export business has diminished. In consequence prices have been shaded until profits are very small. May be some new agreements will be entered into by the manufacturers, when the American Company's affairs have been settled.

MINING STOCKS.

Complete quotations will be found on pages 506 507 and 508 of mining stocks listed and dealt in at:

Boston. Salt Lake. Montreal.
Colo. Springs. San Francisco. London.
Denver. Spokane. Mexico.
New York. St. Louis. Mexico.
Philadelphia. Toronto. Paris.

New York. Apr. 19.

The persistent reports of a large copper combination under Standard Oil management have created a bullish market. Sales of these shares on Wall Street were extraordinarily large this week, and prices have soared. Amalgamated took the lead, its sales on Tuesday alone aggregating 216,705 shares at $124¼@$128¾, the highest prices on record. Later, however, the stock weakened to $123 on profit taking. Anaconda was sympathetically stronger, rising to $54½ on Tuesday on sales of 42,485 shares, but closing the week around $51. Tennessee, which is already under control of members in the Standard Oil coterie, rose to $28, the top notch. Union, of North Carolina, it is reported, has been bought heavily by parties identified with Standard Oil interests; hence, it advanced to $8⅛ on Wednesday. The report, however, is very doubtful.

In the gold list Standard Consolidated, of California, sold at $4.15, and Portland, of Cripple Creek, Colo., at $2.95.

Horn Silver, of Utah, which sold recently at $1.20 on 'change, brought $1.11 per share at auction this week for 6,500 shares.

Other auction sales were 12 shares Lackawanna Iron and Coal Company, Pa., at $90½, and 6 shares Lackawanna Iron and Steel Company, Pa., at $90¼.

Boston. Apr. 17.

(From Our Special Correspondent.)

We have had a wild market in Boston this week—not a booming market I call it, but a wild one, for it has been without reason. In the earlier days of the week it was the Amalgamated stocks which absorbed attention, but later the market broadened and all the coppers came in for their share—to say nothing of other mining stocks.

The starting point of the jump was the announcement made by Kidder, Peabody & Company that they were arranging a consolidation of Montana and Butte with the Amalgamated. As your news columns doubtless tell, the notice states that before undertaking to arrange terms of the consolidation it will be necessary to have deposited 135,000 shares of Butte & Boston and 100,000 shares of Boston & Montana. The directors of both companies recommend the deposit of holdings upon the following terms: Deposits of stock must be made on or before April 25th. In case the arrangement is not completed within 7 days after that date, the stock deposited will be returned. Depositors will have 10 days after the announcement of the terms to accept either of the following propositions: (1) To receive such number of shares of the Amalgamated Company as may be called for under the terms of the agreement. Or (2) to receive $375 per share in cash for Boston & Montana and $92.50 per share in cash for Butte & Boston. Or (3) to withdraw the stock deposited without expense.

Now, this notice is characteristically vague and unsatisfactory; but on the strength of it the market took hold and ran Boston & Montana up to $445 and Butte & Boston to $115½, with every prospect of higher quotations. This is why I call it a wild market.

A notable feature of the week is that Amalgamated stock is being sold here in pretty big lots to go to New York. In other words, Boston seems to be unloading Amalgamated stock, which is not a bad idea at present prices. It goes without saying that there will be a big reaction by-and-by; but I am not prophet enough to say just when.

Of course there are rumors without end of other purchases by the Amalgamated Company, but the majority of these rumors have only slender foundation—if they have any at all.

It has been generally understood and reported here that the Amalgamated people had secured the support and co-operation of Senator W. A. Clark and would in that way control the United Verde output. Recent occurrences in Butte show that these reports are well founded.

The Boston & Montana directors this week declared the dividend for the past quarter, which is payable May 20th. It is $10, and will make $20 per share paid thus far this year. The company paid $43 in 1900, and $38 in 1899. The dividend was generally expected.

Colorado Springs. Apr. 14.

(From Our Special Correspondent.)

The fore part of the week found the market on a rapid downward course which continued until Thursday afternoon, when a decided change for the better set in. During the balance of the week it showed a somewhat better tone, though it was in rather a changeable condition and especially susceptible to bad news. The general opinion among the brokers seems to be that the market has reached the bottom and that a reaction may be looked for, though it will probably not be very great. On the whole, the mining outlook in the district appears to be very good. The total sales for the week were 4,389,083 shares of stock of the cash value of $518,582. The Gold King Company has declared its regular quarterly dividend of 3c. per share after having passed one dividend on account of putting in new machinery. Doctor-Jack Pot, Portland and Ingham continue fairly steady during the week, as did Elkton until Saturday, when it sold down as low as $1.61. During the week Zoe sold as low as 4c.; Coriolanus at 9c.; Gold Dollar at 16c.; Acacia at 12⅞c.; Sedan at 7c. and Pointer at 12c. per share.

San Francisco. April 13.

(From Our Special Correspondent.)

The mining stock market has been quiet enough this week, with business in a very moderate way. On the small dealings, however, the quotations have been higher.

Some prices noted are: Consolidated California & Virginia, $2.15; Caledonia, 76c.; Ophir, 70c.; Silver Hill, 38c.; Mexican, 30c.; Hale & Norcross, 25c.; Gould & Curry, 21c. Standard Consolidated was $4.15 bid and $4.30 asked, with no sales.

According to their sworn statements, filed this week, the following companies report having had cash on hand April 1st, with expenses paid to that date, unless otherwise mentioned: Alpha Consolidated, $2,473; Andes, $507, with assessment being collected; Alta, $524, with an indebtedness of $500 and an assessment being collected; Best & Belcher, $450, with an assessment being collected; Bullion, $131, with an assessment being collected; Caledonia (Gold Hill), $10,085, with March expenses at mine unpaid; Consolidated California & Virginia, $40,122, with one car-load of concentrates and ten car-loads of first-class ore in transit and unsettled for and all expenses paid for the past month; Crown Point, $604, with March expenses at mine unpaid and an assessment being collected; Challar, $2,592; Consolidated New York, $56; Challenge Consolidated, $792; Consolidated Imperial, $1,094; Confidence, $4,068, with March expenses at mine unpaid; Exchequer, $286; Gould & Curry, $4,175, with liabilities of $17,480; Julia Consolidated, $427; Justice, $245, with an assessment being collected; Mexican, $1,773, with an assessment being collected; Ophir, $1,597, with an assessment being collected; Overman, $35, with March expenses at mine unpaid and an assessment being collected; Potosi, $1,750; Savage, $1,367, with an assessment being collected; Sierra Nevada, $6,078; Silver Hill, $8,692; Segregated Belcher, $1,091, with an assessment being collected; Scorpion, $56; Syndicate, $2,454; Standard Consolidated, $177,499, with an indebtedness of $2,787 and bullion returns and expenses for March to hear from; Union Consolidated, $2,047, with an assessment being collected.

The Belcher Mining Company reports having had an indebtedness of $2,815 on April 1st, 1901, with mine expenses for March unpaid and an assessment being collected. Hale & Norcross was in debt $3,541 and is collecting an assessment.

On the Producers' Oil Exchange business was fair only. Some quotations are: Homestake, $7.50; Home, $3.80; Monte Cristo, $2.45; Sterling, $2.05; Caribou, 70c.; El Oro, 55c.; California Standard, 42c.; Yukon, 30c. The market was generally firm, sellers being unwilling to make concessions.

On the San Francisco Oil Exchange business was moderate only. Junction sold at 55c.; Reed Crude, 51c.; Four Oil, 50c.; Lion, 19c. The stocks named, with Monarch, were favorites in the trading.

London. April 2.

(From Our Special Correspondent.)

The only section of the London mining market that has shown any activity this week is that devoted to West African ventures. The shares in some of these companies appear to be finding buyers among the clients of underwriters and the sales are by no means confined to the "making of the market." A new company has been advertised this week, called the Subil Gold Mines, Limited. This is the first subsidiary flotation of the Mansu Company, whose formation I recorded a week or two ago. There is very little information in the prospectus, and the promoters are not people that are known, so that the flotation is not of great interest.

The other sections of the mining market have been practically non-existent all week. South Africans are still depressed on the postponement of peace prospects, and West Australians seem to have dropped out of the field of view.

British Columbia stocks have been very much depressed by the continued collapse of the Whitaker Wright group, and this week they have received an additional shock by the announcement that the dividend on Le Rois, promised three months ago, is not to be paid after all. The reasons for not paying are stated to be the delay in completing the Northport Smelter and a breakdown in the shaft through which the bulk of the ore stoped was brought up. This company, though it has been in existence for over two years, has only paid one dividend so far—one at the rate of 5% paid just a year and a half ago. This is a very poor performance of the promises made in the prospectus and by the directors continually since then. The company is also considerably indebted to the Bank of Montreal, which has had the financing of the mine in its hands, and until this debt is wiped off there is little prospect of dividends.

The fourth annual report of the Mountain Copper Company, Shasta County, Cal., has just been published and shows that this company has passed its meridian. The company has paid a dividend at the rate of 16% for the year 1900; that is, it has distributed in cash £200,000 on a capital of £1,250,000. In addition to this, the sum of £100,000 has been placed to reserve, the amount of which amounts now to £350,000. The ore extracted during 1900 was 179,694 tons, as compared with 203,965, 221,895 and 165,060 tons in 1899, 1898 and 1897, respectively. The quantity of ore smelted was 207,571 tons, a higher figure than before, and the copper produced advanced proportionately, as the average contents continued practically the same. No new discoveries of ore bodies have been made, and operations on other properties acquired have so far yielded no results. It appears, therefore, that the life of the mine will not be a long one; but shareholders have already received 48½% in dividends and there is a reserve as mentioned equal to rather over 25% of the capital, so in the long run there should be a profit on the investment.

Another company of the Whitaker Wright group that has disappointed its shareholders is the Caledonia Copper Company. This company was floated nearly two years ago on the heyday of Whitaker Wright finance to acquire certain copper properties in the island of New Caledonia. The prospectus showed that there was 31,500 tons of 15% copper ore ready for stoping and nearly 100,000 tons of lower grade ore capable of treatment by concentration at four to one. The first report has just been published for the period from formation till the end of September last, and it puts quite a different complexion on things in general. Firstly, the ore turns out to be of very much lower grade than was supposed, and secondly, it is mixed up with iron, lead and zinc sulphides. There appears, therefore, to be considerable doubt as to the profitableness of treatment, but just to keep the shareholders' spirits up the directors publish a revised estimate of profit under the new conditions, for it is necessary to raise further capital to provide smelting plant, etc. It is certain that the Whitaker Wright group will provide no more money, and I am sure I don't know where else it will be found. No doubt the company will struggle on

for a time on bits of capital subscribed here and there, but it is most probable that it will expire of inanition eventually.

The past year or so has been a very uninteresting time in the London market, for there has been nothing to attract attention but stagnation and failures. These remarks are by way of an apology for turning from one group of promotions to another.

Paris. Apr. 7.

(From Our Special Correspondent.)

The chief point of interest in the mining stock market this week has been found in the Transvaal gold stocks, which have submitted to numerous fluctuations, mainly in a downward direction. This has been the result of unfavorable news from South Africa, where affairs seem really in a worse condition than they were several months ago.

The heavy fall in Malfidano stock is still the subject of excited discussion and much blame is attributed to the management for its course. There seems to be no doubt that the course taken was an extremely unwise one. Losses in the stock have been heavy, and there is not a pleasant feeling.

Another zinc company has reduced its dividend, but only in a moderate way. Vieille Montagne pays only 30 fr. for 1900, against 36 fr. in 1899. All the zinc and lead shares are heavy.

The metallurgical shares are still a problem and are rather avoided. In the Russian group, however, there has been a good deal of business. In some of these stocks rather extensive operations for the fall are understod to be in progress.

Copper shares are rather quiet since the fall in Rio Tintos. At present nearly all the stocks seem to be gaining strength, and prices are generally better. Boleo has been more active than any other stock, and its price is high.

It seems somewhat strange that a German coal company should make its apearance on the Paris Bourse; but such is the case. The stock is that of the Harpener Company, which owns important collieries. The stock—500 fr. par value—is selling this week at 1,367 fr. per share.

In a recent letter (published March 30th, page 419) I gave you the production of steel ingots in France in the year 1900 as 1,624,048 metric tons. The production of finished steel is now given as follows: Bars, shapes and merchant steel, 667,171 tons; plates and sheets, 301,651 tons; rails, 295,915 tons; total, 1,264,737 tons. **Azote.**

ANNUAL MEETINGS.

Name of Co.	Locat'n.	Date.	Place of Meeting.
Anchoria-Le'a'd	Colo.	May 15	Colo Springs, Colo.
Constellation.	Utah	May 6	Park City Utah.
Goleta	Cal	May 18	San Francisco, Cal.
Iron Silver	Colo.	May 1	30 Broad St., N. Y.
Justice	Nev.	May 7	San Francisco, Cal.
*Oxford Beta	Cal.	June 4	San Francisco, Cal.
Tamarack	Mich.	May 3	Boston, Mass.
*Tintic	Utah	April 24	50 Broadway, N. Y.

* Special meeting.

ASSESSMENTS

Name of Company.	Location.	No	Delinq.	Sale.	Amt.
Am Oil & Ref	Cal.	3	Apr. 29	May 27	.05
Belcher	Nev.	68	Apr. 9	Apr. 30	.10
Best & Belcher	Nev.	73	May 3	May 24	.15
Bogan	Utah	6	Apr. 26	May 21	.10
Bullion	Nev.	58	Apr. 22	May 13	.03
Crown Point	Nev.	82	Apr 23	May 14	.10
Daylight	Utah	1	Apr. 22	May 14	.00½
Diamond Con	Utah	2	Apr. 8	Apr. 25	.04
Gould & Curry	Nev.	94	Apr. 8	Apr. 29	.10
Grape Vine Canyon	Cal.	4	May 8	June 3	.05
Joe Bowers	Utah	..	Apr. 29		.02
Justice	Nev.	71	Apr. 23	May 13	.05
Kern River Oil	Cal.	2	May 3		1.00
Larkin	Cal.	10	Apr. 20		.02
Lucky Bill	Utah	32	Apr. 27	May 21	.10
Melcher	Utah	3	Apr. 9	Apr. 24	.0¼
Ophir	Nev.	80	Apr. 22	May 13	.15
Overman	Nev.	7	Apr. 10	Apr. 30	.05
Providence	Cal.		Apr. 24		1.00
Reward	Cal.	9	May 13	June 5	.02
Sailor Con	Cal.	9	Apr. 15	May 9	.01
Savage	Nev.	103	May 6	May 24	.10
Seg. Belch. & Mides.	Nev.	27	Apr. 3	Apr. 23	.03
Shoebridge Bonanza	Utah	8	Apr. 9	Apr. 30	.01
Shower Con	Utah	3	Apr. 30	May 31	.02
Snow Flake	Utah	19	Apr. 15	May 1	.01
Snowstorm	Utah	1	Apr. 15	May 15	.00½
South Sliger	Cal.	1	May 6	May 27	.02
Tetro	Utah	18	Apr. 12	May 4	.01½
Union Con.	Nev.	61	May 8	May 27	.15
Yellow Jacket	Nev.	7	May 7	June 12	.10

DIVIDENDS.

Name of Company	Latest Dividend. Date.	Per share.	Total.	Total to date.
†Amalgam. Copper	Apr. 29	1.50	1,125,000	10,500,000
Amal Copper, extra	Apr. 29	.50	375,000	.....
†Am. Steel Hoop, pf	Apr. 30	1.75	245,000	1,715,000
†Am. Tin Plate, com.	May 15	2.00	.....	.....
*Ariz. West. Oil, Cal.	Apr 25	.02	2,000	14,000
§Anaconda Copper	Apr. 26	1.25	1,500,000	19,350,000
Anaconda Copper, ex	Apr. 25	.75	900,000	.....
†Boston & Mont	May 29	5.00	750,000	23,975,000
Boston & Mont, extra	May 20	5.00	750,000	.....
*Bull Hill Con., Colo.	Apr. 25	.00½	7,500	60,000
†Calumet & Hecla	Apr. 22	15.00	1,500,000	74,350,000
*Central Oil, Cal	Apr. 25	.01	6,628	99,420
Central Point Con. Oil	May 1	.02	3,800	19,000
*Consolida'd G. Mines	Apr. 25	.01	10,000	170,000
Con Mercur, Utah	May 1	.12½	125,000	1,716 000
*Doctor-Jack Pot, Colo	Apr. 27	.01	29,000	116,000
†Federal Steel, pf.	Apr. 20	1.50	798,914	8,255,482
*Four Oil, Cal	Apr. 15	.01	3,000	9,000
Globe Oil, Cal	Apr. 25	.00½	3,000	.....
*Gold Coin, Colo	Apr. 25	.03	30,000	720,000
*Homestake, S. D.	Apr. 25	.25	52 500	9,823,750
Homestake, extra	Apr. 25	.25	52,500	.....
†Independence, Colo.	Apr. 1	.07	181 375	281,375
*Mammoth, Utah	Apr. 10	.05	20,000	1,850,000
†Mont. Ore Purch.	Apr. 27	1.00	80,000	2,080,000
Mont. Ore Purch., ex	Apr. 27	2.00	160,000	.....
Mountain Copper, Cal	Apr. 24	1.68	420,000	2,793,750
†National Salt, pf.	May 1	1.75	87,500	700,000
†National Salt, com.	May 1	1.50	105,000	455, 00
New Haven Ir.& Steel	Apr. 22	.15	15,000	117,500
†Parrot, Mont	Apr 29	1.50	314,775	5,083,375
†Phila. Co., com.	Apr. 20	.75	221,282	1,143,292
Phoenix Iron, Pa.	Apr 30	1.75	14,000	.....
†Pittsburg Coal, pf	Apr. 25	1.75	560,000	3 360,000
Quicksilver, pf	May 10	.50	21,500	1,888 411
Shawmut Oil, W. Va.	May 1	.50	25,000	50,000
*Silver King, Utah	Apr. 10	.66⅔	100.000	3 825,000
†Tenn. C., I. & R.R. pf.	May 1	2.00	4,930	252,960
†Texas & Pacific Coal	Apr. 26	1 50	30,000	1,860,000
†Vindicator, Colo	Apr. 25	.03	33,000	544,000

*Monthly. †Quarterly. §Semi-Annual.

STOCK QUOTATIONS.

NEW YORK.

Name of Company.	Location.	Par val.	Apr. 12. H.	Apr. 12. L.	Apr. 13. H.	Apr. 13. L.	Apr. 15. H.	Apr. 15. L.	Apr. 16. H.	Apr. 16. L.	Apr. 17. H.	Apr. 17. L.	Apr. 18. H.	Apr. 18. L.	Sales
Alamo	Colo.	1	.13								.14				4,000
Amalgamated c.	Mont.	100	116	113½	116½	115⅝	124⅝	117	125¾	124¼	126	123	127½		623822
Anaconda, c.	Mont.	25	51.88	48.00	51.63	50.75	52.50	51.50	51.25	52.25	52.50	51.00	50.50		120587
Anaconda Gold	Colo.	5													
Argentum-Jun.	Colo.	2					.23		.24		.23				1,700
British Col. Cop.	B. C.	5	19.25	19.00	19.25	19.00	19.50	19.00	19.50	19.00	19.50	19.00	19.38	19.25	2,000
Brunswick Cons.	Cal.	1	.22	.20	.22		.22		.22		.23				7,200
Chrysolite	Colo.	50													
Comstock T.	Nev.	100	.03												500
Con. Cal. & Va.	Nev.	2½	2.30		2.25		2.35		2.35						1,300
Crescent	Colo.	10							.12						50
Cripple Cr. Con	Colo.	8			.10						.11				1,000
Elkton Con	Colo.	1													
Gold Dollar	Colo.	1					.50								1,000
Golden Fleece	Colo.	1			.42										200
Hale & Norcross	Nev.	3									.27				200
Homestake	S. Dak	100													
Horn Silver	Utah.	20													
Iron Silver	Colo.	20							.64	.63					200
Isabella	Colo.	1	.70		.69		.69		.69		.70				1,200
Jack Pot	Colo.	1									.54				500
Leadville	Colo.	10									.07				500
Little Chief	Colo.	1									.15				100
Mexican	Nev.	3									.94				800
Mollie Gibson	Colo.	5									.28				800
Ontario	Utah.	100													
Ophir	Nev.	5	.70						.85						400
Pharmacist	Colo.	1	.09½		.09				.10						2,500
Phoenix	Ariz.	1													
Portland	Colo.	1					2.95								200
Potosi	Nev.	3					.12								100
Quicksilver, pf.	Cal.	100	9.50	9.00											300
Savage	Nev.	2½					.15								200
Sierra Nevada	Nev.	3			.85				.85						450
Small Hopes	Colo.	20													
Standard Con	Cal.	10							4.15						100
Tenn. Copper	Tenn.	25	28.88	28.00	28.00	27.75	28.00	27.75	27.63	27.38	27.80	27.50	28.50	28.00	500
Union Copper	N. C.	10	5.38	5.13	5.25	5.13	6.50	6.25	7.63	7.50	8.25	8.13	7.75	7.50	
Yellow Jacket	Nev.	3	.15												200

COAL AND INDUSTRIAL STOCKS.

Am. Sm. & Ref.		$100	61¾	60¼	61¾	61	62⅛	61¼	62⅛	61¼	64⅞	62½	64⅛		125188
" " " pf		100	97½	96½	97¾	96¾	97½	96¾	96¾	96	98¾	96⅞	98¾		21,180
Am.S. & W. Con		100	47⅞		47⅞				47½	47			47⅞		1,100
" " " pf'r n		100													
Col. Fuel & I.	Colo.	100	74⅜	73	83½	74¼	83½	82	90¾	79	90	86½	91½		72,440
Col. & H. C.& I.	"	100	20½	19	19½	19¼	19⅜	19	19¼	18⅝	19⅜	19	20		8,200
Federal Steel		100	54½	53⅜	54½	53¾									600
" " pf		100					104								
Fleming'n C.& C	W.Va	100	8	5	8	5	8	3	8	5	8	5			
*Mong. R. Coal	Pa.	100	14¾	14¼	15	14¾	14¾	14½	14¾	14⅝					42,717
" " " pf	"	100	48		48¾	48½	48⅞		49	48¾					645
National Lead		100	18¼				17⅝	16½	18⅛	18	19½	18¾	19		720
" " pf		100	83½		85¾		83		84	83½	85	84⅛			1,460
National Salt		109	44¾	44¼	45½		46¼	45¼	46⅛	45	46¾	46⅛	46¼		3,250
" " pf		100	77				81¾	73	79⅜	79½	80	79⅛	80		6,300
*Pittsburg Coal.	Pa.	100	84		84¼	84⅜	83½	83⅜	83⅝	83⅜					10,517
" " " pf	"	100	99	98¾	99	98⅞	98¼	98⅛	99	98⅞					3,295
Republic I. & S.		100	20	19¼	20¼	19⅝	21	20¼	20⅝	19½	20⅛	19¾	20		13,775
" " pf		100	79½	75¾	76⅝	76	77¼	75½	77	76¼	77	76¼	76¾		9,347
Sloss-Shef		100	36½		37		38	36⅛			36		35½		9,860
" " pf		100									84⅜	83¼	84		400
Stan. Oil		100	804	800	800	798	800	797	800	797	805	800	805	802	
Tenn. C. I.&R R		100	64⅞	64	65	64¼	69¼	65¼	69⅞	67¾	69	66¼	67¼		66,010
Va. Coal & C.	Va.	100	8	7	8	7	10	7	10	7	10	7			

* On Pittsburg, Pa., Exchange. Total sales, 1,160,256. †Ex-Dividend.

SAN FRANCISCO, CAL.

Name of Company.	Location.	Par value.	Apr. 11.	Apr. 12.	Apr. 13.	Apr. 15.	Apr. 16.	Apr. 17.
Belcher	Nev.	$3.00	.21	.22	.21	.23	.21	.20
Best & Belcher	"	3.00	.18	.19	.20	.21	.23	.21
Caledonia	"	3.00	.76	.76	.76	.73	.75	.70
Challenge Con	"	3.00	.14	.14	.14	.16	.15	.14
Chollar	"	3.00	.11	.12	.12	.13	.12	.10
Confidence	"	3.00	.70	.73	.73	.73	.70	.71
Con. California & Virginia	"	2.50	2.10	2.30	2.40	2.45	2.40	2.30
Crown Point	"	3.00	.13	.13	.14	.13	.13	.11
Gould & Curry	"	3.00	.21	.21	.22	.21	.20	.19
Hale & Norcross	"	3.00	.25	.29	.28	.29	.25	.25
Justice	"	2.00	.01	.01	.01	.01	.02	.02
Mexican	"	3.00	.30	.34	.34	.39	.36	.35
Occidental Con	"	3.00	.02	.02	.08	.08	.08	.03
Ophir	"	3.00	.70	.76	.77	.89	.84	.80
Potosi	"	3.00	.09	.09	.10	.10	.10	.09
Savage	"	2.50	.09	.09	.12	.13	.12	.10
Sierra Nevada	"	3.00	.29	.30	.33	.34	.31	.31
Standard Con	Cal.	10.00	4.15	4.30	.....	4.00	4.00	4.15
Union Con	Nev.	2.50	.14	.16	.16	.16	.17	.17
Utah Con	"	1.00	.03	.03	.04	.04	.04	.04
Yellow Jacket	"	3.00	.13	.17	.16	.17	.17	.15

CALIFORNIA OIL STOCKS*

Name of Company.	No. of shares.	Par Val.	Mar. 30. H.	Mar. 30. L.	Apr. 1. H.	Apr. 1. L.	Apr. 2. H.	Apr. 2. L.	Apr 3. H.	Apr 3. L.	Apr 4. H.	Apr 4. L.	Apr. 5. H.	Apr. 5. L.	Sales
Blue Goose	5,000	$100			3.00										
Buckhorn	20,000	10.00					8.50		8.50		2.75	3.00	3.50	3.00	
Cal. Standard	500,000	1.00	.45	.43	.45	.42	.44	.40	.45	.41	.42	.42	.40	9,700	
Caribou	100,000	1.00	.71	.65	.70		.90	.70	.75	.70	1.00	.75	.75	.71	950
El Dorado	100,000	1.00			1.75	1.45	1.75	1.45	1.75	1.50	1.75	1.45	1.75	1.45	
Four	800,000	1.00	.52	.51	.53	.51	.52	.51	.57	.52	.55	.50	.51		3,280
Hanford	2,000	10.00	88.00		94.00	85.00	98.00	87.00	95.00	90.00	95.00	85.00	91.00	87.00	
Hanf'd F. & K.	150,000	1.00			.20	.17	.20		.20		.20		.20		
Home	100,000	1.00	4.00		4.00	3.60	3.75	3.55	3.90	3.80	3.85	3.70	3.80	3.75	1,005
Homestake	10,000	10.00	9.00		9.00	8.75	8.50	7.00	8.50	7.00	8.00		8.00	7.00	
Independence	600,000	1.00	.17	.16	.18	.16	.12	.17	.20	.16	.18	.16	.18	.16	1,800
Kern	100,000	1.00	7.63	7.50	7.63	7.00	7.50	7.00	7.50	7.00	7.50	7.00	8.00	7.25	225
Kern River	20,000	5.00	16.50		16.30		16.00		16.00	10.00	15.00	11.50	14.50	10.00	10
McKittrick	60,000	1.00	.15				.25		.25	.15	.40	.25	.30	.25	100
Mo'arch of Ari	500,000	1.00	.56	.54	.55	.49	.53	.50	.55	.53	.55	.53	.55	.54	4,300
Monte Cristo	500,000	1.00	2.45	2.35	2.45	2.30	2.45	2.35	2.45	2.35	2.50	2.40	2.55	2.46	1,650
Oil City Petrol	5,000	100.	.27	.26	.27	.26	.27	.25	.27	.25	.28	.25	.27	.25	1,000
Petrol. Center.	500,000	1.00	.17	.16	.17	.16	.16	.15	.16	.14	.15	.14	.15	.14	13,250
Queen Esther	100,000	1.00													
San Joaquin	100,000	1.00	9.75		9.75		10.00	9.50	10.00		10.25	9.75	10.00	9.75	20
Sterling	250,000	1.00	2.05	1.95	2.10	2.025	2.05	2.00	2.10	2.05	2.15	2.10	2.15	2.10	5,075
Sunset (Orig.)	100,000	5.00			.35		.45	.25	.45	.25	.35	.25	.33	.27	
Twenty-eight	60,000	10.00	1.70		1.45	1.40	1.50		1.50	1.30	1.40	1.30	1.40	1.35	400
Yukon	100,000	2.50							.25	.23	.28	.25	.26		300

* Producers' Oil Exchange, San Francisco. Total sales, 42,965 shares.

ST. LOUIS, MO.*

Name.	Location.	Share capital.	Par val.	Apr. 16. Bid.	Apr. 16. Ask.	Name.	Location	Share capital.	Par val.	Apr. 16. Bid.	Apr. 16. Ask.
Am.-Nettle	Colo.	800,000	$10	$0.85	$1.10	Granite Bimetallic	Mt.	1000,000	$10	$2.30	$2.45
Catherine Lead.	Mo.	50,000	10	5.50	6.00	Kan. & Tex. Coal.	Mo	25,000	100	48.00	54.00
Central Lead.	Mo.	10,000	100	.....	135.00	Renault Lead.	Mo	30,000	10	11.00	12.00
Columbia Lead.	Mo.	50,000	10	13.00	14.00	St. Joe Lead.	Mo	800.000	10	13.75	14.50
Con. Coal.	Ill.	50 0.0	100	14.50	15.00						
Doe Run Lead.	Mo.	10,000	100	130.00	132.00						

* From our special correspondent.

STOCK QUOTATIONS.

BOSTON, MASS.†

NAME OF COMPANY.	Par val.	Shares issued.	Apr. 11. H.	Apr. 11. L.	Apr. 12. H.	Apr. 12. L.	Apr. 13. H.	Apr. 13. L.	Apr. 15. H.	Apr. 15. L.	Apr. 16. H.	Apr. 16. L.	Apr. 17. H.	Apr. 17. L.	Sales
Adventure Con..	$25	100,000	15.75	15.25	15.50	.....	15.75	15.50	15.88	15.50	15.75	15.63	16.75	15.75	4,247
Allouez.....	25	80,000	.....	.....	.....	.....	.....	.....	.....	.....	8.00	.....	.....	.....	100
Amal. Copper....	100	750,000	117	113⅝	116¼	113	116¼	115	124¼	118	123⅛	124	126	123⅝	76,579
Am. Z. L. & Sm..	25	60,000	14.25	12.00	14.00	13.00	13.50	12.50	13.50	13.00	14.00	13.00	13.75	13.00	8,715
Anaconda.....	25	1200.000	52.75	51.00	.....	.....	51.00	.....	52.25	51.88	53.00	.....	51.00	.....	3,515
Arcadian, c.....	25	150,000	22.50	22.00	22.00	20.50	21.50	.....	21.50	.....	22.00	21.00	23.50	22.00	3,931
Arnold.....	25	60,000	4.38	4.13	4.00	.....	4.00	.....	4.00	3.75	.....	.....	.....	.....	725
Atlantic, c.....	25	40,000	32.00	.....	32.00	31.50	32.00	.....	33.60	32.50	34.00	33.00	35.00	33.50	2,099
Baltic, c.....	25	100,000	47.00	.....	47.88	47.00	47.00	.....	47.75	47.00	47.75	47.50	49.88	47.75	5,524
Bingham, c. g...	10	190,000	25.50	24.50	26.00	25.00	26.00	25.25	26.25	26.00	27.00	26.00	27.00	26.00	16,307
Bonanza Dev....	10	800,000	1.63	1.50	1.63	1.50	1.63	.....	.....	.....	1.63	.....	1.63	1.50	1 700
Boston.....	10	100,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boston & Mont..	25	150,000	399	394	400	398	410	399	434	413	450	415	446	*428	5,216
British Columbia	5	200,000	*9.88	17.00	.....	.....	.....	.....	.....	.....	19.00	18.50	.....	.....	1,480
Butte & Bost., c.	10	200,000	110⅜	107	110⅜	109	110¾	109	118	111	117¾	110	117⅛	115	44,798
Cal. & Hecla, c..	25	100,000	835	.....	837	835	837	830	830	.....	830	.....	838	830	155
Catalpa.....	10	800,000	.....	.....	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	600
Centennial, c....	25	90,000	27.00	26.25	28.50	28.00	28.50	.....	28.50	28.00	29.00	28.50	31.75	29.25	6,288
Cent'l-Eureka....	25	100,000	33.00	32.00	32.50	31.00	32.25	32.00	32.50	32.13	32.00	.....	32.00	31.00	2,005
Central Oil.....	25	60,050	11.25	.....	11.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,265
Cochiti, g.....	10	175,000	8.25	8.00	8.00	7.75	7.50	.....	8.25	7.25	8.00	7.50	8.00	7.50	3,818
Copper Range ...	25	100,000	54.00	52.50	53.00	52.00	53.50	53.00	54.75	54.00	58.00	55.00	60.00	58.50	8,253
Daly-West	20	150,000	.....	.....	35.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
Dominion Coal..	100	150,000	37.50	.....	37.50	37.00	36.50	.....	37.00	.....	37.00	36.75	37.25	36.00	1,270
do, pref.....	100	30,000	111¾	.....	.....	.....	113	112	113	.....	114	.....	.....	.....	141
Elm River.....	12	100,000	.....	.....	5.75	5.50	5.50	.....	5.88	5.50	5.38	5.75	5.50	.....	350
Franklin, c.....	25	100,000	20.00	19.00	20.00	19.00	19.00	.....	19.00	.....	20.00	.....	18.50	.....	912
Humboldt.....	25	40,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
I. Royal Con., c..	25	100,000	45.00	44.50	44.25	43.00	45.00	42.25	45.50	44.88	45.00	44.50	45.00	44.75	4,110
Mass Con.....	25	100,000	18.25	18.00	18.00	17.75	18.00	17.00	19.50	18.50	19.50	18.75	20.63	19.00	7,283
Mayflower.....	25	100,000	3.00	2.75	.....	.....	.....	.....	2.50	.....	.....	.....	2.50	.....	620
Melones.....	10	167,576	.....	.....	.....	.....	.....	.....	.....	.....	1.25	.....	.....	.....	200
Michigan.....	25	100,000	7.88	.....	7.00	.....	.....	.....	7.25	7.00	7.25	.....	7.50	7.00	965
Mohawk, c	25	100,000	31.75	31.00	31.25	31.00	31.75	31.50	32.00	31.50	33.00	32.00	35.00	33.00	8,330
Mont. C. & C....	25	200,000	.....	.....	6.88	6.50	6.50	.....	.....	.....	7.25	.....	6.50	.....	1,020
Napa Con.....	7	100,000	4.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25
N.E. Gas & Coke	100	100,000	12.00	11.75	11.75	11.50	.....	.....	11.75	11.25	11.25	11.13	11.00	10.75	537
N. A. G. Dreg....	10	100,000	.50	.45	.35	.....	.30	.25	.25	.....	.....	.....	.....	.....	2,000
Old Colony.....	25	100,000	.....	.....	4.00	.....	4.50	.....	.....	.....	.....	.....	.....	.....	410
Old Dominion, c	25	150,000	34.75	33.25	33.13	32.50	33.50	32.50	33.50	33.00	35.25	33.50	36.50	34.63	5,369
Osceola, c.....	25	98,000	87.00	86.00	87.00	86.00	87.00	86.00	87.00	.....	88.00	87.00	88.00	87.75	1,919
Parrot, s c.....	10	229,850	57.00	55.25	*5500	54.25	55.00	54.75	57.00	.....	58.00	56.75	58.50	57.25	10,636
Phoenix Con	25	100,000	4.88	.....	4.50	.....	4.50	.....	4.50	.....	4.50	.....	4.50	.....	1,275
Quincy, c.....	25	100,000	.....	.....	185	178	185	184	187	185	186½	185	185	184	1,906
Rhode Island....	25	100,000	6.00	.....	6.00	5.50	5.88	.....	5.88	5.63	6.00	5.75	6.50	6.00	4,660
Santa Fe, g. c....	10	250,000	10.25	9.75	10.00	9.63	9.75	9.50	10.00	9.50	9.88	9.50	9.88	9.50	13,053
San Ysabel.....	15	180,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shawmut Oil	25	50,000	.....	.....	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
Tamarack, c.....	25	60,000	350	340	350	343	350	349	349	.....	349	347	.....	.....	848
Tecumseh.....	25	80,000	1.75	1.63	2.00	1.88	1.75	.....	2.00	1.50	1.75	.....	2.00	1.75	1,530
Trimountain.....	25	100,000	37.00	36.00	39.00	38.50	39.00	.....	39.00	.....	50.00	38.50	47.00	45.00	14,302
Trinity.....	25	160,000	30.50	30.00	30.50	30.00	30.88	30.00	31.00	30.50	37.00	30.88	38.00	35.00	34,303
Union C. L.....	25	80,000	.....	.....	.....	.....	.....	.....	.....	.....	2.00	.....	.....	.....	10 736
UnitedStatesMg.	25	250,000	20.38	20.00	20.25	19.50	20.25	19.50	20.00	19.00	19.88	19.38	21.50	19.25	4,744
U. S. Oil.....	25	100,000	14.25	13.50	13.88	13.50	.....	.....	14.50	13.50	14.00	13.50	13.50	.....	835
Utah Con., g. c..	5	300,000	36.25	35.00	36.00	35.00	35.75	35.50	36.00	35.50	37.25	36.00	37.00	36.00	17,515
Victoria.....	25	100,000	4.25	.....	4.00	.....	.....	.....	4.25	4.00	4.00	.....	4.00	.....	920
Washington.....	25	60,000	.35	.30	.30	.25	.....	.....	.30	.....	.30	.....	.....	.....	475
Winona, c.....	25	100,000	4.75	4.50	5.00	4.75	4.50	.....	5.00	4.50	4.75	.....	5.00	4.75	1,830
Wolverine c....	25	60,000	52.25	51.50	52.50	52.00	52.50	52.00	53.00	52.50	53.75	53.00	53.75	53.63	1,475

† Official quotations Boston Stock Exchange. Total sales, 352,219 shares. * Ex-Dividend.

PHILADELPHIA, PA. §

NAME OF COMPANY.	L'cation.	Par Val.	Apr. 11. H.	Apr. 11. L.	Apr. 12. H.	Apr. 12. L.	Apr. 13. H.	Apr. 13. L.	Apr. 15. H.	Apr. 15. L.	Apr. 16. H.	Apr. 16. L.	Apr. 17. H.	Apr. 17. L.	Sales
Am. Alkali.....	.....	$50	1.88	.....	2.00	1.88	.....	.....	1.88	.....	2.00	1.88	1.88	1.75	3,339
Am. Cement.....	.....	10	7.00	.....	7.00	.....	.....	.....	.....	.....	7.00	.....	7.00	.....	269
Bethlehem Iron.	Pa.	50	.....	.....	61.50	.....	.....	.....	.....	.....	.....	.....	†3025	57.00	175
Bethlehem Steel	"	50	19.75	19.63	21.75	19.75	22.25	21.75	23.00	21.75	21.75	20.88	21.75	21.25	25,216
Cambria Iron...	"	50	.....	.....	46.25	46.00	46.25	.....	46.25	46.13	+4650	46.25	.....	.....	625
Cambria Steel...	"	50	22.13	21.25	22.50	22.00	24.13	21.25	24.50	22 50	23.00	22.00	23.75	.....	186530
Susq. I. & S.....	"	10	2.25	.....	.....	.....	.....	.....	2.25	.....	2.25	.....	2.25	.....	1,500
United Gas I....	"	50	124⅛	124½	125	.....	125	.....	125	124¾	124¼	.....	124½	124	2,035

Total shares sold, 219,670. § Reported by Townsend, Whelen & Co., 309 Walnut St., Philadelphia. † Ex-dividend.

SALT LAKE CITY, UTAH. Apr. 13.

STOCKS.	Shares.	Par val.	Bid.	Asked.	STOCKS.	Shares.	Par val.	Bid.	Asked.
Ajax.....	300,000	$10	$1.10⅛	$1.11¼	Horn Silver.....	400,000	$25	$1.00	.....
Albion.....	.....	.....	.30	.....	Joe Bowers.....	400,000	1	.....	$0.03
Alice.....	400,000	25	.20	.....	Lower Mammoth..	150,000	1	4.46	4.47
Anchor.....	.....	.....	2.30	4.00	Mammoth	400,000	5	2.40	2.55
Ben Butler.....	.....	.....	.11⅜	.11½	May Day.....	400,000	¾	.93½	.95
Bullion-Beck & Ch..	100,000	10	3.25	3.95	Northern Light ..	400,000	5	.10½	.11
Centennial Eureka..	200,000	25	30.00	33.50	Ontario.....	150,000	100	8.00	10.30
Cons. Mercur.....	1,000,000	5	3.30	3.31	Rocco-H'st'k-Nev.	.....	.....	.25	1.00
Dalton.....	500,000	5	.08	.11	Sacramento.....	1,000,000	5	.41	.42½
Dalton & Lark.....	2,500,000	1	.07¼	.07⅜	Showers Cons.....	400,000	5	.05½	.10
Daly.....	150,000	20	2.00	2.22	Silver King.....	150,000	20	.....	.....
Daly-West.....	150,000	20	33.60	.....	Silver Shield.....	.....	.....	10	.....
Dexter.....	200,000	5	.....	1.00	Star Consolidated	500,000	1	.58¾	.59
Eagle & Blue Bell..	250,000	1	.66	.70	Sunbeam.....	250,000	1	.....	.34
Four Aces.....	250,000	1	.....	.00¾	Swansea	100,000	5	3.95	4.05
Galena.....	100,000	10	.....	.....	South Swansea....	150,000	1	.60	.....
Golden Eagle.....	250,000	1	.01⅞	.02⅛	Utah.....	100,000	1	.58	.61
Grand Central.....	250,000	1	6.75	6.89	Valeo.....	200,000	10	.20½	.26
Homestake.....	400,000	1	.03½	.....	Yankee Consol'd..	250,000	0.10	1.20⅞	.....

TORONTO, ONT.

NAME OF COMPANY.	Par val.	Mar. 30. B.	Mar. 30. A.	Apr. 1. B.	Apr. 1. A.	Apr. 2. B.	Apr. 2. A.	Apr. 3. B.	Apr. 3. A.	Apr. 4. B.	Apr. 4. A.	Apr. 5. B.	Apr. 5. A.	Sales.
Ontario:														
Golden Star.	1	.06	.07	.06¾	.07	.07⅜	.07⅞	.07¼	.07½	.07	.07¼	.....	.....	28,000
Ham Reef...	1	.03¼	.....	.05¾	.....	.....	.....	.01¾	.....	.....	.....	.....	.....	6,000
Olive.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
British Col.:														
Cariboo M'k	1	.33½	.36	.33	.38	.33	.38	.34	.37	.34	.36½	.....	.....	2,000
Crow's N. C.	25	78.00	85.00	76.00	90.00	77.00	85 00	80.00	85.00	78.00	85.00	.....	.....	
Deer Trail ..	1	.01¾	.01⅞	.01½	.03¼	.02	.02¼	.02	.02⅝	.02	.02¼	.....	.....	5,000
Eve Star	1	.05	.08	.05	.08	.05	.08	.05	.08	.05	.08	.....	.....	
Fairview....	1	.02¼	.06	.02½	.03	.02½	.03¼	.02½	.03	.02½	.03	.....	.....	15,900
Iron Mask..	1	.22	.38	.32	.38	.32	.38	.32	.38	.32	.38	.....	.....	
Jim Blaine..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knob Hill...	1	.40	.60	.40	.55	.42	.58	.45	.55	.40	.55	.....	.....	.....
Mont Cristo.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mont & Lon	0.24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Morrison....	1	.05	.08	.05	.07	.05½	.07	.04	.07	.04	.07	.....	.....	.....
Mount. Lion	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Star..	1	.78	.83	.78	.83	.77	.83	.78	.83	.75	.82	.....	.....	250
Payne.....	1	.35	.38	.35	.39	.35½	.40	.36	.38	.35	.38	.....	.....	3,000
Princess M..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rambler	1	.25	.27	.26	.28	.26	.28	.25	.26½	.24	.27	.....	.....	1,000
Republic....	1	.24	.28	.24½	.25¼	.25½	.26	.25	.28	.23½	.25	.....	.....	5,000
Van Anda..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Victory Tri.	1	.....	.....	.....	.....	.....	.....	.01⅞	.01⅞	.01½	.01⅞	.....	.....	3,000
Virtue.....	1	.15	.22	.18	.24	.12	.24	.15	.20	.15	.22	.....	.....	.....
War Eagle..	1	.41	.48	.36	.40	.35	.40	.30	.39	.30	.32	.....	.....	.....
Waterloo....	0.10	.01¼	.02	.01¾	.02½	.02	.02¼	.01⅞	.02¾	.01¾	.02¼	.....	.....	.....
White Bear.	1	.03¾	.04	.03½	.04	.03	.04	.03⅜	.03⅞	.03	.04	.....	.....	11,700
Winnipeg ..	1	.06	.09	.06	.09	.08	.09	.06	.08	.06	.08	.....	.....	.....
Develop Co.:														
B.C.G. Field	1	.02¼	.03	.02	.02½	.02	.03	.02	.02¾	.02¼	.02⅝	.....	.....	500
Can. G. F. S.	0.10	.06½	.07	.06½	.07	.06¾	.07	.07	.07¼	.06¾	.07¼	.....	.....	7,500

Total shares sold, 78,850.

COLORADO SPRINGS, COLO. §

NAME OF COMPANY.	Par val.	Apr. 8. B.	Apr. 8. A.	Apr. 9. B.	Apr. 9. A.	Apr. 10. B.	Apr. 10. A.	Apr. 11. B.	Apr. 11. A.	Apr. 12. B.	Apr. 12. A.	Apr. 13. B.	Apr. 13. A.	Sales.
Acacia.....	$1	.16	.16¾	.15¾	.16	.14¼	.14½	.13	.13¼	13⅞	.....	.14⅜	.14½	47,000
Alamo.....	1	.13	.13½	.13	.....	.13	.....	.12⅞	.13	.12¾	.14	.12⅝	.....	5,000
Am. Con....	1	.05	.05¾	.....	.....	.05	.05⅝	.04⅞	.05⅛	.05	.....	.05	.05⅛	5,000
Anaconda..	1	.41	.42	.40⅝	.41	.39½	.40	.39⅝	.....	.40⅛	.41⅛	.40½	.41⅛	15,500
Anchor.....	1	.....	.02½	.....	.02½	.01½	.02½	.....	.02½	.....	.....	.....	.....	.....
Anchoria L	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antelope...	1	.01½	.02	.01⅛	.02	.01⅛	.02	.01⅜	.....	.01⅞	.02¼	.....	.....	.....
Aola.....	1	.03⅛	.03⅝	.03	.03½	.02⅞	.03¼	.02⅝	.02⅞	.03	.03¼	.03	.03¼	13,000
Arcadian...	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arg'ntum J	1	.24½	.25	.24	.25	.24	.....	.23½	.....	.25	.....	.23¾	.29	4,900
Banner.....	1	.02½	.02¾	.....	.02¾	.02⅝	.03	.02⅛	.02¾	.02½	.02	.....	.....	.....
Battle Mt.C	1	.25	.27	.....	.25⅝	.20	.25	.....	.20½	22	.22½	.22	.24	19,000
Ben Hur....	1	.....	.03½	.07	.03½	.07	.07½	.....	.08¼	.06¾	.....	.07	.08⅜	10,000
Black Bell..	1	.12	.18	.....	.....	.11	.12	.10½	.11⅝	.12½	.12⅝	.11¼	.11⅜	15,000
Blue Bell..	1	.15½	.16¼	.15¼	.17	.13⅝	.13⅞	.14	.....	.17	.18	.17⅛	.17⅞	8,000
Bob Lee....	1	.....	.05	.....	.05	.03½	.05	.....	.....	.03½	.04	.04¼	.....	3,000
Buckhorn..	1	.03⅜	.04	.03⅜	.05¼	.03⅜	.03½	.03⅜	.03⅜	.03¾	.03⅞	.03⅞	.04	37,000
Cadillac....	1	.01⅞	.02¼	.01⅞	.02¼	.01⅞	.02¼	.01⅞	.02¼	.01⅞	.02¼	.01⅞	.02¼	.....
Central C'n	1	.03¾	.03¼	.03⅜	.03⅝	.03⅛	.03⅜	.03¼	.03⅜	.03¼	.03¾	.03⅛	.03½	41,000
Champion..	1	.05	.05¾	.05	.05¼	.04	.06	.04	.05	.05	.05¼	.04¾	.05¼	3,000
Chicolo	1	.02½	.02¾	.02½	.02⅝	.02½	.02⅝	.02½	.02¾	.02½	.02⅝	.02½	.02⅝	10,000
C. K. & N..	1	.02¼	.02⅝	.02⅛	.....	.02⅛	.....	.02¼	.02⅝	.02⅛	.02¼	.02	.02¼	18,000
C. C.Col'bia	1	.11	.....	.11⅜	.....	.12	.12¾	.12¼	.12¾	.12⅝	.12⅞	.12½	.13	8,000
C. C. G. Ext	1	.08	.11	.....	.13¾	.....	.10¾	.....	.....	.09¾	.10	.....	.10	19,200
C. C. & Man	1	.07⅝	.07¾	.07	.07⅞	.07⅛	.07½	.07½	.07⅝	.....	.....	.07½	.07⅝	48,400
Copper Mt.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Creede& CC	1	.09	.11	.09	.11	.09½	.10	.08	.11	.09	.11	.09	.10	.....
C. C. Con...	1	.10½	.10⅝	.09½	.10	.09⅝	.09⅞	.09¾	.10	.10	.....	.09¾	.10¼	57,000
Dante.....	1	.06¾	.07	.06⅞	.07¼	.06¾	.07	.06¾	.07	.07½	.07½	.06¾	.07¼	7 000
Des Moines	1	.05	.05¾	.....	.....	.....	.....	.....	.....	.05⅞	.06¼	.05¾	.06¼	.....
Eclipse.....	1	.03½	.09	.03⅝	.08¾	.08	.08½	.07⅞	.08½	.08¼	.08½	.08¼	.08½	20,000
Elkton Con	1	1.77	1.77¾	1.77	1.77½	1.75½	1.76	1.70	1.74½	1.68¾	1.69½	1.61	1.61½	45,980
El Paso G..	1	.43½	.45	.44	.....	.....	.44½	.42½	.45	.41	.42½	.41	.42	30,633
Enterprise.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
F. Rawlings	1	.25	.27	.25	.27	.25	.25½	.21	.25	.20	.25	.20½	.25	4,000
Findley....	1	.....	.12½	.11	.11⅜	.11	.11½	.12	.12½	.11¾	.12	.11⅜	.12	13,000
Garf. Conn.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Golden Fl..	1	.40	.42	.40	.41	.40	.41	.40	.41	.35	.41	.35	.41	10,500
Gold Hill..	1	.....	.02½	.01½	.02	.02	.02½	.02	.02½	.02½	.02¾	.02	.02½	47,000
Gold Sov'n.	1	.06	.06½	.05¾	.06	.....	.....	.05	.05½	.06	.06¾	.05⅞	.06	21,500
Hayden....	1	.01⅝	.01⅞	.01⅝	.01¾	.01⅝	.01¾	.....	.....	.....	.....	.....	.....	4,000
Humboldt..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ida May....	1	.....	.20	.....	.20¼	.....	.20	.15¼	.20	.....	.....	.17	.20	.....
Ing. Con...	⅒	.19	.19½	.19½	.19⅝	.....	.20	.19	.19¾	.19	.19¾	.13¼	.....	19,400
Ironclad ..	1	.05¾	.....	.05⅝	.05⅞	.05¼	.05¾	.05⅝	.05¾	.05¾	.06	.05⅛	.06	9,000
Isabella...	1	.70½	.71	.69½	.70	.67½	.68¼	.66¼	.67	.65½	.....	.66	.66½	25,650
Jack Pot...	1	.52	.53	.52½	.53	.52	.52½	.50	.52	.50½	.....	.50	.52	6,500
Josephine..	1	.....	.01¼	.01	.01¼	.01	.....	.01	.....	.01	.....	.01⅛	.....	10,000
Key West..	1	.02	.02¼	.02	.02½	.....	.02	.01¾	.....	.....	.....	.....	.....	.....
Lexington .	1	.07	.07½	.07	.07¼	.06½	.06¾	.06¼	.07	.07¼	.....	.07	.07⅜	44,500
Magnet R..	1	.02⅞	.03¼	.02⅞	.....	.02⅝	.03	.02⅞	.03	.02⅞	.03	.02⅞	.03⅛	7,000
Margaret...	1	.01½	.02	.01½	.02	.....	.02	.01	.02	.01½	.02	.01⅜	.02	4,000
Margery...	1	.02	.02¼	.01½	.02¼	.....	.....	.02	.02¼	.02	.....	.02½	.02¾	7,000
Matoa.....	1	.16	.17¼	.16	.17¼	.16	.....	.16	.....	.16	.....	.....	.....	17,000
Midway.....	1	.03½	.03¾	.03⅜	.03¾	.03¼	.03¾	.03¼	.03½	.03⅜	.03⅝	.03⅜	.03¾	12,000
M. J. T.....	1	.02¾	.03	.02½	.02⅝	.02	.02¾	.02¼	.02½	.02½	.02⅝	.02½	.02⅝	15,000
Mobile.....	1	.....	.02	.02	.02½	.02	.....	.....	.03	.02¼	.03	.02¼	.03	1,000
Moll.Dwyer	1	.05¾	.05⅝	.05¼	.05⅝	.05¼	.05⅜	.05	.05¼	.05¼	.05⅜	.....	.....	38,000
Mollie Gib.	1	.23	.25	.22	.25	.22	.23½	.22½	.23	.22½	.24	.22½	.23½	3,500
Monarch....	1	.04⅝	.04¾	.04¾	.04¾	.04¾	.04¾	.04½	.04⅝	.04⅝	.05	.....	.....	88,000
Montreal....	1	.03	.04	.03	.03¼	.02½	.03¼	.02⅝	.03⅛	.03	.03¼	.....	.....	.....
Moon-A'c'r	1	.29¼	.31	.29½	.30	.29	.30	.28½	.30	.29½	.30	.29	.31	1,500
Morning S .	1	.03	.03⅝	.03⅛	.03¼	.03	.03¼	.03	.....	.02	.....	.03	.03⅛	3,000
Mtn.Beauty	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Rosa....	1	.35	.48	.30	.42	.....	.42	.25	.....	.32	.43	.30	.....	1,500
National....	1	.05	.05½	.04¾	.04⅞	.04½	.04¾	.04¼	.04⅜	.04⅞	.05½	.....	.....	42,000
Nellie V....	1	.05	.05¼	.04½	.05	.....	.05	.....	.05	.05	.05½	.04⅞	.05	12,000
New Haven	1	.07⅛	.07⅜	.07¼	.07⅛	.07⅛	.07¼	.07¼	.07⅛	.07½	.08	.07⅛	.08	33,000
Olive B'nch	1	.03⅜	.03½	.03⅜	.03¾	.03¾	.03¾	.03½	.03⅝	.03½	.03¾	.03⅜	.03¾	11,000
Ophir.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oriole.....	1	.02⅞	.03⅛	.02⅞	.03	.02⅞	.03⅛	.02¾	.02⅞	.02	.03⅛	.03	.03⅛	8,000
Orphan.....	1	.13	.14	.12	.....	.....	.....	.11	.....	.13¾	.....	.14	.16	10,000
Pelican.....	1	.....	.01⅞	.....	.01⅞	.02	.

STOCK QUOTATIONS.

LONDON.

April 4.

Name of Company.	Country.	Author-ized capital.	Par value.	Last dividend. Amt.	Last dividend. Date.	Quotations. Buyers	Quotations. Sellers.
American:			£ s. d.	s.d.		£ s. d.	£ s. d.
Alaska Goldfields, g	Alaska	£300,000	1 0 0	2 3	Jan., 1901	16 3	18 9
Alaska-Treadwell, g	"	1,030,000	5 0 0	1 6	" "	4 17 6	5 2 6
Anaconda, c., s	Montana	6,000,000	5 0 0	8 2	Oct., 1900	9 7 6	9 10 0
British Am. Corp	British Col'mbia	1,500,000	1 0 0	2 0	Mar., 1900	4 3	4 9
Copiapo, c	Chile	200,000	2 0 0	3 4	Dec., 1900	3 6 3	3 8 9
De Lamar, g., s	Idaho	400,000	1 0 0	0 6	May, 1900	2 6	3 6
El Oro, g	Mexico	1 000,000	1 0 0	1 0	Feb., 1901	1 5 0	1 7 3
Frontino & Bolivia, g	Colombia	140,000	1 0 0	1 6	Oct., 1899	2 2 6	2 5 0
Grand Central, g., s	Mexico	300,000	1 0 0	2 0	Jan., 1900	5 0	7 6
Hall Mg. & Sm., c., s	British Col	325,000	1 0 0			4 6	5 6
Le Roi, g	" "	1,000,000	5 0 0	5 0	Nov., 1899	7 0 0	7 5 0
Le Roi No. 2, g	" "	120,000	5 0 0			8 15 0	4 5 0
Lillie, g	Colorado	250,000	1 0 0	2½	Apr., 1900	2 6	7 6
Montana, g., s	Montana	660,000	1 0 0	6	Apr., 1899	2 6	3 0
†Mountain Copper	California	1,250,000	5 0 0	9 0	Oct., 1900	4 15 6	5 0 0
Stratton's Independence	Colorado	1,100,000	1 0 0	9	Apr., 1901	1 11 3	1 13 9
St. John del Rey, g	Brazil	600,000	1 0 0	1 0	Dec., 1900	1 1 3	1 3 9
Utah Con.,g.(Highland Boy)	Utah	800,000	1 0 0	rts.	Mar., 1898	6 17 6	7 2 6
Ymir, g	British Col'mbia	200,000	1 0 0	1 0	Jan., 1901	1 8 9	1 11 3
European:							
Linares, l	Spain	45,000	3 0 0	7 0	Mar., 1901	6 0 0	7 0 0
Mason & Barry, c., sul	Portugal	420,000	2 0 0	£1	" "	3 10 0	3 15 0
Rio Tinto, c	Spain	1,625,000	5 0 0	£2	Nov., 1900	57 0 0	57 5 0
" " pref	"	1,625,000	5 0 0	2 6	" "	6 0 0	6 5 0
Tharsis, c	"	1,250,000	2 0 0	1 5 0	Apr., 1900	8 2 6	8 7 6
Australian:							
Assoc. Gold Mines	W. Australia	500,000	1 0 0	1 6	Jan., 1900	2 7 6	2 10 0
Broken Hill Prop., s	N. S. Wales	384,000	8 0	1 6	Nov., 1900	2 6 0	2 7 0
Great Boulder Prop	W. Australia	175,000	2 0	6	Feb., 1901	1 3 6	1 4 0
Hannan's Brownhill, g	"	140,000	1 0 0	7 6	Oct., 1900	4 0 0	4 2 6
Ivanhoe Gold Corp	"	1,000,000	5 0 0	5 0	Nov., 1900	8 5 0	8 7 6
Kalgurlie, g	"	120,000	1 0 0	rts.	Oct., 1899	3 10 0	3 12 6
Lake View Consols, g	"	250,000	1 0 0	5 0	Aug., 1900	8 13 9	8 16 3
Mt. Lyell M. & R., l., c	Tasmania	900,000	3 0 0	2 0	Apr., 1901	4 6 3	4 8 9
Mt. Morgan, g	Queensland	1,000,000	1 0 0	7	Mar., 1901	4 13 9	4 16 3
Waihi g	New Zealand	320,000	1 0 0	2 6	Mar., 1901	8 12 6	8 17 5
Indian:							
Champion Reef, g	Colar Fields	220,000	10 0	5 0	Jan., 1901	6 1 3	6 3 9
Mysore Gold, g	"	256,300	10 0	rts.	Dec., 1900	5 17 6	6 0 0
Nundyroog, g	"	242,000	1 0 0	2 9	Mar., 1901	4 8 9	4 11 3
Ooregum, g	"	143,000	1 0 0	4 0	Apr., 1901	4 17 6	5 0 0
" pref. g	"	120,000	1 0 0	4 0	" "	5 17 6	6 2 6
African:							
British S. Africa, chartered	So. Africa	5,000,000	1 0 0	rts.	May, 1899	3 7 6	3 8 9
Cape Copper, c	"	600,000	1 0 0	5 0	Jan., 1901	5 0 0	5 5 0
" " pref	"	150,000	2 0 0	5 0	" "	4 7 6	4 12 6
City & Suburban (New), g	Transvaal	1,360,000	4 0 0	8 0	Aug., 1899	5 12 6	5 17 6
Con. Deep Level, g	"	200,000	1 0 0	x all	June, 1898	1 2 6	1 7 6
Crown Reef, g	"	120,000	1 0 0	18 0	Nov., 1899	14 10 0	14 15 0
De Beers Con., d	Cape Colony	3,950,000	5 0 0	£1	Jan., 1901	31 7 6	31 12 6
Ferreira, g	Transvaal	90,000	1 0 0	30 0	Aug., 1899	21 0 0	22 0 0
Geldenhuis Deep, g	"	350,000	1 0 0	8 0	" "	10 0 0	10 5 0
Geldenhuis Est., g	"	200,000	1 0 0	10 0	" "	6 8 9	6 11 3
Henry Nourse, g	"	125,000	1 0 0	10 0	Apr., 1900	8 10 0	8 15 0
Jagersfontein, d	Orange Fr. St.	1,000,000	5 0 0	6 0	Sept., 1900	16 10 0	17 10 0
Johannesburg Con. Invest	So. Africa	2,750,000	1 0 0	2 0	Aug., 1899	2 1 3	2 3 9
Jubilee, g	Transvaal	50,000	1 0 0	5 0	Sept., 1899	6 0 0	6 10 0
Langlaagte Estate, g	"	470,000	1 0 0	3 0	Aug., 1899	3 2 6	3 5 0
May Con., g	"	290,000	1 0 0	6 0	July, 1899	4 5 0	4 7 6
Meyer & Charlton, g	"	100,000	1 0 0	8 0	June, 1899	5 7 6	5 12 6
Namaqua, c	Cape Colony	200,000	2 0 0	4 0	Dec., 1900	5 0 0	5 5 0
Primrose (New), g	Transvaal	340,000	1 0 0	6 0	Aug., 1899	4 2 6	4 5 0
Rand Mines, g	So. Africa	490,000	1 0 0	15 0	" "	41 2 6	41 5 0
Robinson, g	Transvaal	2,750,000	5 0 0	8 0		9 2 6	9 7 6
Sheba, g	"	1,100,000	1 0 0	0 6	July, 1898	1 0 0	1 2 6
Sim. & Jack Prop., g	"	5,000,000	5 0 0	4 0	July, 1899	6 5 0	6 7 6
Wolhuter, g	"	850,000	4 0 0	2 0	Feb., 1899	4 7 6	4 12 6

C, copper. D, diamonds. G, gold. L, lead. S, silver. † Dividend pending.

DENVER, COLO:

Name of Company.	Par val.	Apr. 8. B.	Apr. 8. A.	Apr. 9. B.	Apr. 9. A.	Apr. 10. B.	Apr. 10. A.	Apr. 11. B.	Apr. 11. A.	Apr. 12. B.	Apr. 12. A.	Apr. 15. B.	Apr. 15. A.	Sales.
Acacia	1	.16¼	.16½	.....	.16	.16	.....	.13¾	.14	.....	.14	.....	.....	23,000
Alamo	5	.....	.....	.11½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anaconda	1	.41	43½	.40¾	.41¾	.39¾	.40	.41	.42	.41	.41½	.40	.....	1,900
Arg. J	1	.....	.....	.....	.....	.22	.....	.....	.....	.....	.....	.....	.....	.....
Dictator	1	.01⅞	.02	.01⅞	.02	.01½	.02	.01½	02¼	.01⅝	.01¼	.02¾	.02	28,000
Elkton	1	.....	.....	.....	1.77½	.....	1.78	.....	.....	.....	.....	.....	.....	500
Ironclad	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Isabella	1	.70	.....	.69	.71	.66	.....	.65½	.....	.66¾	.....	.....	.....	200
Josephine	1	.01	.01½	.01	.01¾	.....	.....	.....	.....	.01⅝	.01⅝	.....	.....	4,500
Magnet R.	1	.....	.....	.....	.....	.03¾	.03	.....	.....	.....	.....	.....	.....	1,000
National	1	.03½	.....	.....	.03¾	.04⅜	.04¾	.04⅜	.04⅝	.05	.05¼	.04¼	.....	14,000
New Haven	1	.07⅝	.07⅝	.07	.07¾	.07⅛	.07¼	.07⅛	.07⅜	.07¼	.....	.07⅛	.08	9,000
Reno	1	.02¼	.....	.02¾	.02⅞	.02¾	.03¼	.02⅝	.....	.02¼	.02⅝	.02¼	.02¼	12,000
Republic	1	.06¼	.06⅝	.....	.06¾	.....	.....	.06¼	.06¼	.06¼	.06½	.....	.....	9,000

‡ Official Quotations Denver Stock Exchange. Total sales, 103,100 shares.

SPOKANE, WASH.

Week Apr. 10.

Name of Company.	Par val.	B.	A.	Sales.	Name of Company.	Par val.	B.	A.	Sales.
Crystal	.....	.04¼	.05⅜	.....	Mountain Lion	$1	.26	.25	.....
Deer Trail Con	$1	.01½	.02¼	.....	Princess Maud	0.10	.01⅞	.02¼	33,000
Evening Star	1	.04¼	.05¾	.....	Quilp	1	.27	.31¾	.....
Gold Ledge	.....	.01½	.02	5,000	Rambler Cariboo	0.25	.24½	.26	8,500
Jim Blaine	1	.....	.....	.....	Reservation	.....	.03⅛	.04½	.....
Lone Pine-Surp. Con	1	.06⅜	.07	.....	Sullivan	.....	.08¾	.09¼	.....
Morning Glory	0.10	.04⅜	.04¾	24,000	Tom Thumb	.....	.10½	.13	.....

PARIS.

Mar. 28.

Name of Company.	Country.	Product.	Capital Stock.	Par value.	Latest divs.	Prices. Opening.	Prices. Closing.
			Francs.	Fr.	Fr.	Fr.	Fr.
Acieries de Creusot	France	Steel mfrs	27,000,000	2,000	85.00	1,927.00	1,917.00
" " Firminy	"	" "	3,000,000	500	175.00	3,050.00	3,020.00
" " Fives-Lille	"	" "	12,000,000	500	.....	462.00	462.00
" " Huta-Bank	Russia	Iron & steel	.....	500	.....	3,490.00	3,480.00
" " la Marine	France	Steel mfrs	20,000,000	500	60.00	1,490.00	1,460.00
Anzin	"	Coal	.....	.....	360.00	5,505.00	5,500.00
Boleo	Lower Cal	Copper	.....	500	176.00	2,620.00	2,675.00
Briansk	Russia	Coal & iron	.....	500	.....	694.00	612.50
Champ d'Or	S. Africa	Gold	3,375,000	25	3.75	36.50	36.50
Courrieres	France	Coal	600,000	300	90.00	2,274.00	2,290.00
Dombrowa	Russia		.....	500	75.00	990.00	990.00
Dynamite Centrale	France	Explosives	.....	500	22.50	440.00	436.00
Escombrera-Bleyberg	Spain	Lead	.....	500	70.00	900.00	933.00
Fraser River	Brit. Col'mb.	Gold	250,000	25	.....	6.75	6.25
Huanchaca	Bolivia	Silver	40,000,000	125	5.00	150.00	146.00
Laurium	Greece	Zinc & lead	16,300,000	500	30.00	415.00	432.00
Malfidano	Italy	Zinc	12,500,000	500	50.00	690.00	720.00
Metaux, Cie. Fran. de	France	Metal d'lers	25,000,000	500	10.00	470.00	468.00
Mokta-el-Hadid	Algeria	Iron	18,312,500	500	85.00	934.00	910.00
Napthe Baku	Russia	Petroleum	.....	.....	.....	610.50	605.00
Napthe Nobel	"	"	.....	.....	.....	532.50	522.50
" " parts	"	"	.....	.....	.....	10,650.00	10,450.00
Nickel	N. Caled'nia	Nickel	10,000,000	250	17.50	485.00	487.00
Penarroya	Spain	Coal, etc	.....	500	100.00	2,480.00	2,480.00
Rebecca	Colo'do, U.S.	Gold	5,000,000	25	.....	2.50	1.75
Salines de l'Est	France	Salt	.....	500	5.00	225.00	225.00
Salines du Midi	"	"	.....	500	25.00	850.00	860.00
Vielle Montagne	Belgium	Zinc	9,000,000	80	36?00	625.00	626.25

DIVIDENDS.

COAL, IRON, OIL, AND INDUSTRIAL COMPANIES.

Number.	Name and Location of Company.		Author-ized Capital Stock.	Shares. Issued.	Shares. Par Val	Dividends. Paid, 1901.	Dividends. Total to Date.	Dividends. Latest. Date.	Dividends. Latest. Amt.
1	Alabama Coal & Iron,pf	Ala...	$2,500,000	25,000	$100	$43,750	$262,500	Mar.. 1901	1.75
2	Altoona Coal & Coke	Pa....	2,500.000	250 000	10	75,000	75,000	Jan.. 1901	.30
3	Am. Agricul. Chem., pf.	U. S..	20,000,000	170,449	100	510,000	2,040,000	Mar.. 1901	3.00
4	American Cement	Pa....	2,100,000	200,000	10	80,000	220,000	Jan.. 1901	.40
5	American Coal	Md..	1,500,000	60,000	25	75,000	1,057,500	Mar.. 1901	1.25
6	Am. Fuel Oil	Cal...	100,000	100,000	1	1,000	15,000	Jan.. 1901	.01
7	Am. Iron & Steel, com	Pa....	17,000,000	34,000	50	8,500	42,500	Jan.. 1901	.25
8	Am. Iron & Steel, pf	Pa....	3,000,000	60,000	50	37,500	237,480	Jan.. 1901	.62½
9	Am. Sheet Steel, pf	U. S..	26,000,000	245,000	100	428,750	428,750	Jan.. 1901	1.75
10	Am. Steel Hoop, pf	U. S..	14,000,000	140,000	100	245,000	1,470,000	Jan.. 1901	1.75
11	Am. Steel & Wire, com	U. S..	50,000,000	500,000	100	1,500,000	4,125,000	Apr.. 1901	1.25
12	Am. Steel & Wire, pf	U. S..	40,000,000	400,000	100	1,400,000	7,000,000	Apr.. 1901	1.75
13	Arizona Western Oil	Cal...	100,000	100,000	1	.....	1,000	Sept.. 1900	.01
14	Bethlehem Steel	Pa....	15,000 000	300,000	50	150,000	1,050,000	Mar.. 1901	.50
15	Buckhorn Oil	Cal...	300,000	16,000	10	.....	3,800	Mar.. 1900	.05
16	Burlington Oil	Cal...	60,000	60,000	1	600	4,200	Jan.. 1901	.01
17	California Oil & Gas	Cal...	2,000,000	200,000	10	250,000	250,000	Jan.. 1901	1.25
18	Cambria Iron	Pa....	10,000,000	169,320	50	169,320	846,600	Apr.. 1901	1.00
19	Cambria Steel	Pa....	16,000,000	320,000	50	160,000	1,760,000	Feb.. 1901	.50
20	Central Oil	W.Va	1,500,000	60,000	25	22,500	45,000	Feb.. 1901	.37½
21	Central Oil	Cal...	750,000	662,800	1	19,884	92,792	Mar.. 1901	.01
22	Central Point Con. Oil	Cal...	200,000	190,000	1	7,600	15,200	Feb.. 1901	.02
23	Colo. Fuel & Iron, pf	Colo..	2,000,000	20,000	100	80,000	1,240,000	Feb.. 1901	4.00
24	Consolidation Coal	Md..	10,250,000	102,500	100	205,000	5,318,000	Feb.. 1901	2.00
25	Continental Oil	Cal...	300,000	240,000	1	7,200	7,200	Apr.. 1901	.03
26	Crucible Steel, pf	U. S..	25,000,000	250,000	100	426,991	853,982	Mar.. 1900	1.75
27	Diamond Star Oil	Cal...	250,000	100,000	1	.....	6,250	Nov.. 1900	.02
28	Diamond State Steel	Del ..	3,000,000	150,000	10	60,000	160,000	Jan.. 1901	.40
29	Empire Steel & Iron, pf	U. S..	5,000,000	23,700	100	35,550	213,300	Jan.. 1901	1.50
30	Federal Steel, com	U. S..	100000,000	464,843	100	2,324,215	4,067,377	Feb.. 1901	5.00
31	Federal Steel, pf	U. S..	100000,000	532,609	100	798,914	7,456,568	Jan.. 1900	1.50
32	Flat Top C. L. Ass'n,com	Va..	5,000,000	37,141	100	37,141	315,699	Feb.. 1901	1.00
33	Flat Top C. L. Ass'n, pf	Va..	5,000,000	37,141	100	37,141	1,987,027	Feb.. 1901	1.00
34	Four Oil	Cal...	300,000	300,000	1	3,000	3,000	Feb.. 1901	.01
35	General Chem., com	U. S..	12,500,000	71,679	100	71,679	485,945	Mar.. 1901	1.00
36	General Chem., pf	U. S..	12,500,000	82,600	100	123,900	889,778	Mar.. 1901	1.50
37	Gray Eagle Oil	Cal...	250,000	100,000	2½	50,000	170,000	Jan.. 1901	.50
38	Great Western Oil	Cal...	100,000	10,000	10	.....	10,000	Oct.. 1900	.10
39	Home Oil	Cal...	100,000	100,000	1	30,000	230,000	Mar.. 1901	.10
40	Homestake Oil	Cal...	100,000	10,000	10	4,000	27,000	Mar.. 1901	.30
41	Jefferson&Clearf.C'l,com	Pa....	1,500,000	15,000	100	.....	30,000	Aug.. 1900	2.00
42	Jefferson&Clearf.C'l,pf	Pa....	1,500,000	15,000	100	37,500	225,000	Feb.. 1901	2.50
43	Kern Oil	Cal...	100,000	100,000	1	25,000	375,000	Jan.. 1901	.25
44	Kern River Oil	Cal...	100,000	20,000	5	.....	10,000	Sept.. 1900	.50
45	Lehigh Coal & Nav	Pa....	14,346,650	286,933	50	.....	18,516,990	Oct.. 1900	1.50
46	Maryland Coal, pf	Md..	1,885,005	18,850	100	.....	645,869	Dec.. 1900	3.00
47	Monongahela R. Coal,pf	Pa....	10,000,000	200,000	50	350,000	700,000	Jan.. 1901	1.75
48	Montana Coal & Coke	Mont.	5,000,000	200,000	25	.....	120,000	Oct.. 1900	.30
49	National Salt, com	U. S..	7,000,000	70,000	100	105,000	350,000	Feb.. 1901	1.50
50	National Salt, pf	U. S..	5,000,000	50,000	100	87,500	612,500	Feb.. 1901	1.75
51	National Steel, pf	U. S..	27,000,000	270,000	100	472,500	3,780,000	Mar.. 1901	1.75
52	National Tube, com	U. S..	40,000,000	398,604	100	597,906	1,793,718	Feb.. 1901	1.50
53	National Tube, pf	U. S..	40,000,000	399,963	100	1,399,870	4,899,546	Apr.. 1901	1.75
54	New Central Coal	Md..	1,000,000	50,000	20	.....	510,000	Nov.. 1900	.40
55	New Haven Iron & Steel	Conn.	500,000	100,000	5	17,500	112.500	Apr.. 1901	.10
56	Oceanic Oil	Cal...	$100,000	100,000	$1	.....	$2,000	Dec.. 1900	.01
57	Pacific Coast Borax	Cal...	2,000,000	19,000	100	$57,000	819.500	Mar.. 1901	1.00
58	Park Crude Oil	Cal...	100,000	82,146	1	.....	4.897	Sept.. 1900	.01
59	Pennsylvania Coal	Pa....	5,000,000	100,000	50	.....	19,700,000	Nov.. 1900	2.00
60	Pennsylvania Salt Mfg	Pa....	2,500,000	50,000	50	.....	12,550,000	Oct.. 1900	3.00
61	Pennsylvania Steel, pf	Pa....	1,500,000	15,000	100	52,500	183,750	Apr.. 1901	1.75
62	Phila. Gas, com	Pa....	14,752,131	295,042	50	184,402	922,010	Jan.. 1901	.62½
63	Phila. Gas, pf	Pa....	3,998,350	79,967	50	99,959	299,877	Mar.. 1901	1.25
64	Pittsburg Coal., pf	Pa....	32,000,000	320,000	100	560,000	2,800,000	Jan.. 1901	1.75
65	Producers' & Con. Oil	Cal...	1,000,000	10,000	100	4,000	57,000	Mar.. 1901	.10
66	Republic Iron & Steel,pf	U. S..	25,000,000	203,069	100	710,742	2,487,596	April. 1901	1.75
67	Rex Oil	Cal...	500,000	85,000	5	.....	26,000	Oct.. 1900	.08
68	San Joaquin Oil	Cal...	100,000	100,000	1	10,000	10,000	Jan.. 1901	.10
69	Shawmut Oil	W.Va	1,250,000	50,000	25	25,000	25,000	Feb.. 1901	.50
70	Shelby Iron	Ala..	1,000,000	10,000	100	.....	250,000	June. 1900	12.00
71	Sloss-Sheffield Ir.&St.,pf	U. S..	20,000,000	67,000	100	231,250	573,250	Apr.. 1901	1.75
72	So. Cal. Oil & Fuel	Cal...	300,000	100,000	1	.....	3,000	Dec.. 1900	.00¼
73	Standard Oil (of N. J.)	U. S..	100000,000	975,000	100	19,500,000	92,625,000	Mar.. 1901	20.00
74	Sunday Lake Iron	Mich.	1,000,000	40,000	25	40,000	40,000	Feb.. 1901	1.00
75	Susquehanna I. & S., pf.	Pa..	1,500,000	300,000	5	22,500	537,500	Jan.. 1901	.07½
76	Tenn. Coal, I. &R.R.,com	Tenn.	23,000,000	225,536	100	.....	1,102,144	Nov.. 1900	2.00
77	Tenn. Coal, Ir. & R.R.,pf	Tenn.	248,000	2,480	100	4,960	248,000	Feb.. 1901	2.00
78	Texas & Pacific Coal	Tex..	2,000,000	20,000	100	60,000	1,860,000	Apr.. 1901	1.50
79	United States Crude Oil	Cal...	100,000	10,000	1	.....	3,200	Dec.. 1900	.03
80	United States Marble	Wash	1,500,000	1,500,000	1	3,750	3,750	Mar.. 1901	.00¼
81	United States Oil	W.Va	2,500,000	100,000	25	.....	744,250	Oct.. 1900	.50
82	Va.-Carolina Chem.,com	U. S..	12,000,000	90,000	100	90,000	810,000	Mar.. 1901	1.00
83	Va.-Carolina Chem.,pf	U. S .	12,000,000	100,000	100	200,000	1,400,000	Jan.. 1901	2.00
84	Warwick Iron & Steel	Pa....	1,500,000	14,133	100	.....	158,597	Nov.. 1900	2.00
85	West Lake Oil	Cal ..	500,000	500,000	1	.....	50,000	Sept.. 1900	.01
86	Westmoreland Coal	Pa....	5,000,000	250,000	50	.....	750,000	Oct... 1900	1.50
87	Yukon Oil	Cal...	2,500,000	100,000	2½	.....	21,000	Oct... 1900	.02

This table is corrected up to March 18th. Correspondents are requested to forward changes or additions.

DIVIDENDS.

GOLD, SILVER, COPPER, ZINC, LEAD AND QUICKSILVER COMPANIES.

Number.	Name and Location of Company.		Authorized Capital Stock.	Shares. Issued.	Par Val	Dividends. Paid, 1901.	Total to Date.	Latest. Date.	Amt.
1	Acacia, g.	Colo.	$1,500,000	1,500,000	$1	.....	$45,000	Dec.. 1900	.01
2	Adams, s.l.c.	Colo.	1,500,000	150,000	10	.....	701,000	Nov.. 1900	.05
3	Ætna Con., q.	Cal..	500,000	100,000	5	.....	225,000	Apr.. 1900	.15
4	Alaska Goldfields	Alask	1,500,000	250,000	5	$127,500	252,500	Jan.. 1901	.51
5	Alaska-Mexican, g.	Alask	1,000,000	180,000	5	18,000	519,031	Jan.. 1901	.10
6	Alaska-Treadwell, g.	Alask	5,000,000	200,000	25	75,000	4,595,000	Jan.. 1901	.37½
7	Alice, g. s.	Mont.	10,000,000	400,000	25	.....	1,875,000	Apr.. 1898	.05
8	Alliance, g.	Colo..	500,000	500,000	1	.....	47,500	Nov.. 1899	.07
9	Amalgamated, c.	Mont.	75,000,000	750,000	100	1,500,000	9,000,060	Jan.. 1901	2.00
10	Amanda, g.	Colo..	1,000,000	1,000,000	1	.....	10,000	June. 1900	.01
11	Amazon, g.	Colo..	600,000	600,000	1	.....	121,882	May.. 1900	.10
12	American, g.	Colo..	3,000,000	300,000	10	.....	446,000	Dec.. 1899	.07
13	Amer. Sm. & Ref., pref.	U. S..	32,500,000	274,000	100	479,500	3,162,053	Jan.. 1901	1.75
14	Am. Zinc, Lead & Sm.	Mo...	2,500,000	60,000	25	.....	180,000	Jan.. 1900	1.00
15	Anaconda, c.	Mont.	30,000,000	1,200,000	25	.....	16,950,000	Oct.. 1900	2.00
16	Anchoria-Leland, g.	Colo..	600,000	600,000	1	.....	198,000	Apr.. 1899	.03
17	Anglo-Mexican, g.	Mex..	2,001,625	400,230	25	.....	1,825,048	Dec.. 1899	.24
18	Appie Ellen, g.	Colo..	600,000	600,000	1	.....	25,000	Nov.. 1898	.04
19	Apollo Con., g.	Alask	1,000,000	100,000	10	.....	210,000	Jan.. 1900	.07
20	April Fool, g.	Nev..	500,000	500,000	1	.....	16,000	Oct.. 1899	.03
21	Argonaut, g.	Cal..	2,000,000	200,000	10	.....	490,000	May.. 1900	.05
22	Arizona, c.	Ariz..	3,190,550	.....	....	421,153	1,886,001	Mar.. 1901	1.32
23	Associated, g.	Colo..	1,250,000	1,250,000	1	.....	84,000	Feb.. 1899	.01
24	Atlantic, c.	Mich.	1,000,000	40,000	25	80,000	880,000	Feb.. 1901	2.00
25	Bald Butte, g. s.	Mont.	250,000	250,000	1	45,000	967,148	Mar.. 1901	.06
26	Bankok-Cora Belle, g.	Colo..	600,000	600,000	1	.....	107,510	July.. 1896	.01
27	Big Seven, g.	Cal...	100 000	100,000	1	.....	6,000	Apr.. 1898	.03
28	Big Six, g. s. l.	Colo..	500,000	500,000	1	.....	15,000	May.. 1898	.00½
29	Boston, q.	Cal..	1,000,000	100,000	10	.....	20,000	Jan.. 1900	.10
30	Boston-Aurora, pref.	Mo...	800,000	32,000	25	.....	66,160	May.. 1900	.50
31	Boston & California, g.	Cal...	600,000	600,000	1	.....	72,000	June. 1899	.06
32	Boston & Colo. Smelting	Colo..	750,000	15,000	50	11,250	326,350	Jan.. 1901	.75
33	Boston Duenweg, z.	Mo...	1,000,000	40,000	10	....	56,000	June. 1900	.10
34	Boston Get There, z.	Mo...	250,000	22,500	10	.....	20,250	Apr.. 1900	.10
35	Boston Gold-Copper Sm.	Colo..	1,000,000	1,000,000	1	.....	50,000	Nov.. 1900	.02½
36	Boston & Mont. Con., c. s. g	Mont.	3,750,000	150,000	25	1,500,000	22,475,000	Feb.. 1901	10.00
37	Boston-Phila., z. l.	Kas..	200,000	20,000	10	.....	2,000	May.. 1900	.10
38	Boston-Providence, z., pf	Mo...	150,000	15,000	10	.....	17,242	Aug.. 1900	.05
39	Boston Springfield, z.	Mo...	500,000	20,000	25	.....	15,000	June. 1900	.25
40	Boston Sunflower, z.	Mo...	150,000	15,000	10	.....	4,500	Oct.. 1899	.30
41	Breece, i. s.	Colo..	5,000,000	200,000	25	10,000	110,000	Feb.. 1901	.05
42	Buffalo Hump, g.	Idaho	1,000,000	100,000	10	25,000	300,000	Jan.. 1901	.10
43	Bull Hill Con., g.	Colo..	1,500,000	1,500,000	1	45,000	60,000	Mar.. 1901	.01
44	Bullion-Beck & Champ.	Utah.	1,000,000	100,000	10	.....	2,498,400	June. 1900	.10
45	Bunker Hill & Sullivan.	Idaho	3,000,000	300,000	10	63,000	1,116,000	Mar.. 1901	.07
46	Butte & Boston Con., c.	Mont.	2,000,000	200,000	10	.....	1,000,000	Dec.. 1900	5.00
47	Butterfly-Terrible, g.	Colo..	1,500,000	1,250,000	1	6,250	6,250	Jan.. 1901	.00½
48	Calumet & Hecla, c.	Mich.	2,500,000	100,000	25	.....	72,850,000	Dec.. 1900	20.00
49	Cariboo-McKinney, g.	B. Col	1,250,000	1,250,000	1	.....	478,087	Oct.. 1900	.01½
50	Centen'l-Eureka, g. s. l. c.	Utah.	5,000,000	100,000	25	50,000	2,467,700	Jan.. 1901	.50
51	Center Creek, l. z.	Mo...	1,000,000	100,000	10	.....	40,000	Dec.. 1900	.20
52	Center Star, g.	B. C..	3,500,000	3,500,000	1	105,000	175,000	Apr.. 1901	.01
53	Central Lead, l.	Mo...	1,000,000	10,000	100	15,000	222,000	Mar.. 1901	.50
54	Champion, g. s.	Cal...	340,000	34,000	10	.....	402,300	Dec.. 1899	.25
55	Cloverdale, z.	Mo...	1,000,000	100,000	10	.....	80,000	July.. 1900	.20
56	C. O. D., g.	Colo..	500,000	500,000	1	.....	25,000	Mar.. 1896	.01
57	Colonial, l.	Mo...	1,000,000	1,000,000	1	.....	10,000	Aug.. 1899	.01
58	Columbia, l.	Mo...	500,000	48,500	10	.....	12,125	June. 1900	.05
59	Columbian Hyd., c.	C'l'm	375,000	75,000	5	.....	454,500	Jan.. 1899	.12
60	Commodore, g.	Colo..	1,200,000	1,200,000	1	.....	432,000	Jan.. 1899	.04
61	Commonwealth, z., pref.	Mo..	500,000	100,000	5	.....	50,000	June. 1900	.05
62	Consolidated Gold Mines	Colo..	1,000,000	1,000,000	1	30,000	160,000	Mar.. 1901	.01
63	Con. Mercer Gold Mines.	Utah.	5,000,000	1,000,000	5	.....	1,591,000	Nov.. 1900	.11
64	Consolidated, z. l., pf.	Mo...	400,000	400,000	1	.....	8,000	Jan.. 1900	.20
65	Copiapo, c.	Chile.	1,000,000	100,000	10	.....	2,520,000	July.. 1899	1.44
66	Cordell, z. l.	Mo...	300,000	60,000	5	.....	30,000	Sept.. 1900	.05
67	Cripple Creek Con., g.	Colo..	2,000,000	2,000,000	1	.....	160,000	Mar.. 1900	.08
68	Crœsus, g.	Cal...	1,000,000	200,000	5	24,000	175,300	Mar.. 1901	.06
69	Crowned King, g. s.	Ariz..	6,000,000	600,000	10	.....	242,760	May.. 1899	.02
70	Dalton & Lark, g. s. l.	Utah.	2,500,000	2,500,000	1	.....	87,500	Mar.. 1896	.00½
71	Daly West, g.	Utah.	3,000,000	150,000	20	135,000	742,500	Mar.. 1901	.30
72	Deadwood-Terra, g.	S. D..	5,000,000	200,000	25	.....	1,350,000	May.. 1898	.15
73	Deer Trail Con., g.	Wash	3,000,000	3,000,000	1	.....	55,000	Dec.. 1899	.00½
74	De Lamar, g. s.	Idaho	2,000,000	400,000	5	.....	2,394,000	May.. 1900	.12
75	Della S., g. s.	Colo..	1,000,000	1,000,000	1	.....	60,000	Jan.. 1897	.01
76	Dewey Con., g.	Utah.	10,000	10,000	1	2,250	4,850	Feb.. 1901	.07½
77	Dixie, g.	Utah.	125,000	125,000	1	.....	10,000	Apr.. 1900	.02
78	Doctor-Jack Pot Con., g	Colo..	3,000,000	2,900,000	1	87,000	87,000	Mar.. 1901	.01
79	Doe Run, l.	Mo...	1,500,000	10,000	100	15,000	417,072	Jan.. 1901	1.50
80	Ducktown, c. i. sul. (ord)	Tenn.	374,000	7,480	50	.....	133,144	May.. 1900	5.00
81	Ducktown (founder).	Tenn.	1,000	200	5	.....	66,160	May.. 1900	125.00
82	Eldorado, g.	Cal..	1,000,000	100,000	10	.....	10,000	July.. 1899	.10
83	Elkton Con., g.	Colo..	3,000,000	2,500,000	1	75,000	1,054,461	Mar.. 1901	.03
84	El Oro, g. s.	Mex.	5,000,000	1,000,000	5	240.000	480.000	Feb.. 1901	.24
85	Empire State-Idaho, l. s.	Idaho	6.000.000	505,542	10	130,663	803,351	Mar.. 1901	.10
86	Enterprise, g.	Colo..	500,000	500,000	1	.....	900,000	Sept.. 1898	.05
87	Fanny Rawlings, g.	Colo..	1,000,000	1,000,000	1	.....	20,000	Aug.. 1899	.01
88	Fern, g.	B. C..	200,000	200,000	1	.....	10,000	Jan.. 1898	.05
89	Ferris-Haggarty, c.	Wyo.	1,000,000	1,000,000	1	.....	5,000	Mar.. 1899	.00½
90	Florence, s.	Mont.	2,500,000	400,000	5	.....	223,780	Mar.. 1901	.05
91	Frisco Con., l. s.	Idaho	2,500,000	500,000	5	.....	920,000	Nov.. 1899	.25
92	Frontino & Bolivia, c.	C'l'm	643,310	128,662	5	.....	1,109,066	Oct.. 1899	.36
93	Galena, s. l. g.	Utah.	1,000,000	100,000	10	.....	71,000	Sept.. 1897	.05
94	Garfield Con., g.	Colo..	1,200,000	1,200,000	1	.....	34,000	May.. 1899	.01
95	Gemini.	Utah.	500,000	5,000	100	.....	700,000	Aug.. 1900	10.00
96	Gold Belt, g.	Colo..	1,250,000	1,250,000	1	.....	112,500	Aug.. 1900	.09
97	Gold Coin of Victor, g.	Colo..	1,000,000	1,000,000	1	90,000	690,000	Mar.. 1901	.03
98	Gold Deposit, g.	Colo..	500,000	500,000	1	.....	10,000	Mar.. 1900	.02
99	Gold & Globe, g.	Colo..	750,000	750,000	1	.....	51,625	July.. 1897	.00½
100	Gold King, g.	Colo..	1,000,000	936,850	1	.....	178,001	Oct.. 1900	.03
101	Golden Cycle, g.	Colo..	1,000,000	200,000	5	30,000	408,500	Mar.. 1901	.05
102	Golden Eagle, g.	Colo..	500,000	500,000	1	.....	25,000	June. 1900	.01
103	Golden Fleece, g. s.	Colo..	600,000	600,000	1	.....	569,480	Feb.. 1897	.01
104	Golden Reward, g.	S. D..	1,000,000	100,000	10	.....	155,000	Feb.. 1898	.15
105	Grand Central, g. s.	Mex..	1,500,000	250,000	5	.....	840,000	Jan.. 1900	.48
106	Grand Central, g.	Utah.	250,000	250,000	1	.....	691,250	Nov.. 1900	.10
107	Grand Gulch, c.	Ariz..	250,000	240,000	1	.....	9,600	Apr.. 1900	.01
108	Grass Valley Expl.	Cal...	100,000	30,000	2	....	30,000	Jan.. 1900	.25
109	Greater Gold Belt, g.	Colo..	5,000,000	3,800,000	1	.....	76,000	June. 1900	.02
110	Gwin, g.	Cal..	1,000,000	100,000	10	25,000	176,500	Feb.. 1901	.10
111	Hall, c. s.	B. C..	1,625,000	267,609	5	.....	220,000	May.. 1899	.24
112	Hecla, l. s.	Idaho	250,000	1,000,000	¼	.....	100,000	Dec.. 1900	.02
113	Hecla Con., s. l.	Mont.	1,500,000	30,000	50	15,000	2,235,000	Feb.. 1901	.50
114	Helena, g.	Ore..	1,000,000	1,000,000	1	15,000	65,000	Feb.. 1901	.01
115	Hidden Treasure, g.	Cal...	360,000	36,000	10	.....	457,452	Sept.. 1900	.10
116	Holy Terror, g.	S. D..	500,000	500,000	1	.....	172,000	Jan.. 1900	.01
117	Home, g. (Leadville).	Colo..	2,000,000	2,000,000	1	25,000	125,000	Mar.. 1901	.25
118	Homestake, g.	S. D..	21,000,000	210,000	100	315,000	9,718,750	Mar.. 1901	.50
119	Horn-Silver, g. s. c. z. l.	Utah.	10,000,000	400,000	25	.....	5,279,000	June. 1900	.05
120	Idaho, s. l.	B. C..	500,000	500,000	1	.....	292,000	Jan.. 1899	.05½
121	Independence Con., g.	Colo..	2,500,000	2,500,000	1	.....	100,000	Aug.. 1900	.04
122	Ingham Con., g.	Colo..	750,000	1,359,600	⅛	10,197	10,197	Feb.. 1901	.00¼
123	Iowa, g. s. l.	Colo..	$1,666,667	1,666,667	$1	$16,667	$153,500	Jan.. 1901	.01
124	Iron Mountain, g. s. l. i.	Mont.	5,000,000	500,000	10	.....	507,500	Apr... 1898	.02
125	Iron Silver.	Colo.	10,000,000	500,000	20	.....	2,550,000	Dec.. 1900	.10
126	Isabella, g.	Colo..	2,250,000	2,250,000	1	22,500	742,500	Mar.. 1901	.01
127	Jamison, g.	Cal...	3,900,000	390,000	10	.....	50,700	Apr... 1899	.10
128	Klondike Bonanza, g.	Klon.	750,000	52,750	5	.....	50,000	Aug.. 1899	.24
129	La Fortuna, g.	Ariz..	250,000	250,000	1	37,500	953,000	Mar.. 1901	.05
130	Lake City, g.	Colo.	50,000	50,000	1	.....	3,875	May.. 1900	.01
131	Last Chance, s. l.	B. C..	500,000	500,000	1	.....	45,000	Apr... 1899	.05
132	Last Dollar, g.	Colo..	1,500,000	1,500,000	1	30,000	150,000	Feb.. 1901	.02
133	Le Roi, g.	B. Col	5,000,000	200,000	5	.....	1,305,000	Nov.. 1899	1.20
134	Lightner, g.	Cal...	125,000	102,255	1	2,556	15,338	Feb.. 1901	.02½
135	Lillie, g.	Colo..	1,250,000	250,000	5	.....	349,183	Apr... 1900	.05
136	Mammoth, g. s. c.	Utah	10,000,000	400,000	25	20,000	1,810,000	Feb.. 1901	.05
137	Marian Con., g. s. z. l. i.	Colo..	5,000,000	500,000	10	.....	202,000	Sept.. 1899	.01
138	Mary McKinney, g.	Colo..	1,000,000	1,000,000	1	30,000	210,000	Jan.. 1901	.03
139	Midget, g.	Colo..	1,000,000	1,000,000	1	.....	120,000	Dec.. 1900	.15
140	Modoc, g. s.	Colo..	500,000	500,000	1	15,000	220,000	Mar.. 1901	.01
141	Mollie Gibson, s. l.	Colo..	5,000,000	1,000,000	5	.....	4,080,000	Jan.. 1895	.05
142	Montana, Ltd., g. s.	Mont.	3,300,000	657,128	5	.....	453,700	Apr... 1899	.12
143	Montana Ore Purchas'g.	Mont.	2,500,000	80,000	25	240,000	1,840,000	Jan.. 1901	3.00
144	Montreal, g.	Colo..	1,000,000	750,000	1	.....	7,500	Nov.. 1898	.01
145	Monument, g.	Colo..	300,000	300,000	1	3,000	21,124	Feb.. 1901	.01
146	Moon-Anchor, g.	Colo..	1,750,000	350,000	5	.....	261,000	Nov.. 1898	.07½
147	Moose, g.	Colo..	600,000	600,000	1	.....	186,000	Feb.. 1896	.01
148	Morning Star Drift, g.	Cal...	240,000	2,400	100	.....	854,400	Sept.. 1900	3.00
149	Morse, g.	Colo..	1,250,000	1,250,000	1	.....	215,650	May.. 1899	.12
150	Moulton, g.	Mont.	2,000,000	400,000	5	.....	500,000	Oct.. 1893	.05
151	Mountain, c.	Cal..	6,250,000	250,000	25	.....	2,373,750	Oct.. 1900	2.16
152	Mt. Diablo, s.	Nev..	5,000,000	50,000	100	.....	260,271	Jan.. 1900	.10
153	Mt. Rosa, g.	Colo..	1,000,000	1,000,000	1	.....	75,000	Dec.. 1899	.04
154	Mt. Shasta, g.	Cal...	100,000	20,000	5	.....	6,000	May.. 1899	.30
155	Napa Con., q.	Cal ..	700,000	100,000	7	20,000	1,120,000	Apr... 1901	.10
156	National Lead, com.	U. S..	15,000,000	149,054	100	.....	1,341,486	Mar.. 1900	1.00
157	National Lead, pf.	U. S .	15,000,000	149,040	100	260,820	10,840,100	Mar.. 1901	1.75
158	New Elkhorn, g.	Colo..	437,500	87,500	5	.....	1,325,000	June. 1898	.48
159	New Idria, q.	Cal...	500,000	100,000	5	40,000	290,000	Apr... 1901	.20
160	New Jersey Zinc.	U. S..	10,000,000	100,000	100	400,000	3,200,000	Feb.. 1901	4.00
161	N. J. & Mo., z.	Mo...	250,000	2,500	100	.....	11,000	June. 1900	2.00
162	New York, z.	Kas..	700,000	28,000	25	.....	6,500	Oct.. 1899	.25
163	N. Y. & Hon Rosario, s. g.	C. A..	1,500,000	150,000	10	60,000	1,475,000	Mar.. 1901	.10
164	New Zealand, g.	Colo..	600,000	600,000	1	60,000	60,000	Jan.. 1901	.10
165	North Star, g.	B. C..	1,500,000	1,300,000	1	39,000	156,000	Mar.. 1901	.03
166	North Star, g.	Cal ..	5,000,000	250,000	10	.....	584,850	Nov.. 1899	.20
167	Nugget, g.	Colo..	1,000,000	991,000	1	9,910	64,910	Jan.. 1901	.01
168	Old Colony Zinc & Sm.	Mo...	1,100,000	69,909	10	17,477	85,753	Feb.. 1901	.25
169	Omega, g.	Colo..	1,500,000	1,200,000	1	.....	18,188	June. 1900	.01½
170	Ontario, s. l.	Utah.	15,000,000	150,000	100	.....	13,662,500	Apr... 1900	.30
171	Original Empire, g.	Cal...	5,000,000	50,000	100	.....	530,000	Oct.. 1899	1.00
172	Orphan Belle, g.	Colo..	1,000,000	1,000,000	1	.....	197,899	Dec.. 1899	.09
173	Osceola, c.	Mich.	2,500,000	93,000	25	.....	3,638,500	Dec.. 1900	3.00
174	Parrot, c.	Mont.	2,300,000	229,850	10	344,775	4,738,600	Jan.. 1901	1.50
175	Payne Con., s. l.	B. C..	3,000,000	2,600,000	1	78,000	1,438,000	Jan.. 1901	.03
176	Pennsylvania Con., g.	Cal...	5,150,000	51,500	100	.....	161,325	May.. 1900	.10
177	Pioneer, g.	Cal...	1,000,000	200,000	5	.....	62,500	Mar.. 1899	.12½
178	Plumas Eureka, g.	Cal ..	1,406,250	140,625	10	.....	2,797,544	Apr... 1900	.60
179	Pointer, g.	Colo..	1,250,000	1,250,000	1	12,500	12,500	Mar.. 1901	.01
180	Portland, g.	Colo..	3,000,000	3,000,000	1	180,000	3,487,080	Jan.. 1901	.06
181	Princess, g.	Colo..	1,000,000	1,000,000	1	.....	55,000	Feb.. 1897	.00½
182	Queen Bess, s. l.	B. C..	500,000	100,000	5	.....	25,000	July.. 1899	.12½
183	Quicksilver, pref.	Cal...	4,300,000	43,000	100	.....	1,866,911	July.. 1900	.50
184	Quincy, c.	Mich.	2,500,000	100,000	25	300,000	12,270,000	Feb.. 1901	3.00
185	Rambler—Cariboo, s. l.	B. Col	1,250,000	1,250,000	1	.....	105,000	Apr... 1900	.01
186	Reco, s. l.	B. C..	1,000,000	1,000,000	1	.....	287,500	Jan.. 1898	.10
187	Republic Con., g.	Wash	3,500,000	3,500,000	1	.....	382,500	Mar.. 1900	.01
188	Reward, g.	Cal...	1,000,000	100,000	10	.....	20,000	Aug.. 1899	.20
189	Rocco-Homestake, g. s.	Nev..	300,000	300,000	1	13,500	22,500	Mar.. 1901	.01½
190	Russell-Irwin, z.	Mo ...	250,000	25,000	10	.....	15,000	Oct.. 1899	.10
191	Sacramento, g.	Utah.	5,000,000	1,000,000	5	.....	138,000	Oct.. 1899	.00½
192	St. John del Rey, g.	Br'zil	3,000,000	425,482	5	.....	13,633,991	Dec.. 1900	.24
193	St. Joseph, l.	Mo...	3,000,000	250,000	10	37,500	3,347,000	Mar.. 1901	.15
194	Santa Rita, g.	Colo..	1,000,000	1,000,000	1	.....	4,000	July.. 1900	.02
195	Silver King, g. s. l.	Utah.	3,000,000	150,000	20	275,000	3,725,000	Mar.. 1901	.66⅔
196	Silver Shield, g.	Utah.	300,000	300,000	1	3,000	4,500	Feb.. 1901	.00½
197	Small Hopes, s.	Colo..	5,000,000	250,000	20	.....	3,325,000	Feb.. 1899	.10
198	Smuggler, s. l. z.	Colo..	1,000,000	1,000,000	1	90,000	1,820,000	Mar.. 1901	.03
199	Southern Boy, g.	Colo..	1,250,000	875,000	1	.....	17,500	May.. 1900	.02
200	South Swansea, s. l.	Utah.	300,000	275,000	1	7,500	172,500	Mar.. 1901	.05
201	Squaw Mountain, g.	Colo..	2,000,000	2,000,000	1	.....	10,000	Nov.. 1899	.00½
202	Standard Con., g. s.	Cal...	2,000,000	178,394	10	17,839	3,981,941	Feb.. 1901	.10
203	Standard, s. l.	Idaho	500,000	500,000	1	25,000	2,215,000	Feb.. 1900	.05
204	Stratton's Independ'ce.	Colo..	5,500,000	1,000,007	5	120,001	2,885,353	Jan.. 1901	.12
205	Swansea, s. l.	Utah.	500,000	100,000	5	15,000	291,500	Mar.. 1901	.05
206	Tamarack, c.	Mich.	1,500,000	60,000	25	.....	7,290,000	Dec.. 1900	10.00
207	Tomboy, g.	Colo..	1,500,000	300,000	5	.....	956,000	Dec.. 1900	.24
208	Touraine, g.	Colo..	1,250,000	1,250,000	1	.....	87,500	Apr... 1900	.07
209	Union, g.	Colo..	1,250,000	1,250,000	1	.....	395,244	Sept.. 1900	.25
210	Union, z. l.	Kas..	500,000	500,000	1	15,000	50,000	Mar.. 1901	.01
211	United, z. l., pref.	Mo...	6,000,000	14,938	25	.....	30,263	Oct.. 1900	.50
212	Utah, g.	Utah.	1,000,000	100,000	10	.....	181,000	Oct.. 1900	.02
213	Vindicator Con., g.	Colo..	1,500,000	1,500,000	1	27,500	521,000	Jan.. 1901	.02½
214	War Eagle Con., g. s. c.	B. C..	2,000,000	1,750,000	1	.....	545,250	Feb.. 1900	.01½
215	What Cheer, z.	Mo...	225,000	22,500	10	.....	11,250	May.. 1900	.20½
216	Wolverine, c.	Mich.	1,500,000	60,000	25	.....	510,000	Oct.. 1900	2.00
217	Yellow Aster, g.	Cal...	1,000,000	100,000	10	.....	459,410	Dec.. 1900	.10
218	Ymir, g.	B. C..	1,000,000	200,000	5	48,000	96,000	Jan. 1901	.24
219	Zoe, g.	Colo..	1,500,000	1,500,000	1	.....	7,500	Dec.. 1900	.00½
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This table is corrected up to March 18th. Correspondents are requested to forward changes or additions.

CHEMICALS, MINERALS, RARE ELEMENTS, ETC.—CURRENT WHOLESALE PRICES

	Cust. Meas.	Price.
Abrasives—		
Carborundum, f.o.b. Niagara Falls, Powd., F. FF. FFF	lb.	$0.08
Grains	"	.10
Corundum, N. C.	"	.07@.10
Chester, Mass.	"	.04½@.05
Crushed Steel, f. o. b. Pittsburg	"	.05½
Emery, Turkish flour, in kegs	"	.03¼
Grains, in kegs	"	.05@.05½
Naxos flour, in kegs	"	.03½
Grains, in kegs	"	.05@.05½
Chester flour, in kegs	"	.03½
Grains, in kegs	"	.05@.05½
Peekskill, f.o.b. Easton, Pa., flour, in kegs	"	.01¼
Grains, in kegs	"	.02½
Crude, ex-ship, N. Y.; Abbott (Turkey)	lg. ton	26.50@30.00
Afrodissia (Turkey)	"	23.00@24.00
Kuluk (Turkey)	"	22.00@24.00
Naxos (Greek) h. gr.	"	26.00
Pumice Stone, Am. powd.	lb.	.01@.02
Italian, powdered	"	.01¼
Lump, per quality	"	.04@.40
Rottenstone, ground	"	.02¼@.03
Lump, per quality	"	.05@.14
Rouge, per quality	"	.10@.30
Steel Emery, f.o.b. Pittsburg	"	.07
Acids—Acetic, 30% pure	100 lbs.	3.50
30% ch. pure	"	6.00
80% pure	"	7.50
Benzoic, English	oz.	.12
German	lb.	.40
Boracic, crystals	"	.10¼@.11
Powdered	"	.11@.11½
Carbolic, crude, 60%	gal.	.27
Cryst, 37% drums	lb.	.23
Liquid, 95%	gal.	.45
Carbonic, liquid gas	lb.	.12½
Chromic, crude	"	.20
Chem. pure	"	.50
Hydrochloric, ch. pure	"	.07
Hydrofluoric, 36%	"	.03
48%	"	.05
Best	"	.25
Nitric, chem. pure	"	.09
Sulphuric, chem. pure	"	.07
Sulphurous, liquid anhy.	"	.08
Tartaric, cryst	"	.28@.28¼
Powder	"	.28¾@.29
Alcohol—Grain	gal.	2.45
Refined wood, 95@97%	"	.60@.65
Purified	"	1.20@1.50
Alum—Lump	100 lbs.	1.75
Ground	"	1.85
Powdered	"	3.00
Chrome, com'l	"	2.75@3.00
Aluminum—Nitrate	lb.	1.50
Oxide, com'l, common	"	.06½
Best	"	.20
Pure	"	.80
Hydrated	100 lbs.	2.60
Sulphate, pure	"	1.50@1.75
Com'l	"	1.15@1.25
Ammonia—Aqua, 16°	lb.	.03
18°	"	.03¼
20°	"	.03¾
26°	"	.05½
Ammonium—		
Bromide, pure	"	.52@.53
Carbonate lump	"	.08¾@.08½
Powdered	"	.09@.09¼
Muriate, gran.	"	.06
Lump	"	.09¼
Nitrate, white, pure (99%)	"	.10½
Phosphate, com'l	"	.10
Chem. pure	"	60
Antimony—		
Glass	"	.30@.40
Needle, lump	"	.05½@.06
Powdered, ordinary	"	.05¾
Best	"	.08½
Oxide, com'l white, 95%	"	.09½
Com'l white, 99%	"	.12
Com'l gray	"	.07
Sulphuret, com'l	"	.16
Arsenic—White	"	.04¼@.04½
Red	"	.07@.07⅞
Asphaltum—		
Ventura, Cal.	sh. ton	32.00
Cuban	lb.	.01½@.03½
Egyptian, crude	"	.05½@.06
Trinidad, refined	lg. ton	35.00
San Valentino (Italian)	"	16.00
Seyssel (French) mastic	sh.ton	21.00
Gilsonite, Utah, ordinary	lb.	.03
Select	"	.03¾
Barium—Carbonate, Lump, 80@90%	sh. ton	25.00@27.50
92@98%	"	26.00@29.00
Powdered, 80@90%	lb.	.01¾@.02
Chloride, com'l	100 lbs.	1.67½@1.76
Chem. pure cryst	lb.	.05
Nitrate, powdered	"	.06
Oxide, com'l, hyd. cryst	"	.18
Hydrated, pure cryst.	"	.25
Pure, powd.	"	.27
Sulphate	"	.02
Barytes—Am. Cr., No. 1	sh.ton	9.00
Crude, No. 2	"	8.00
Crude, No. 3	"	7.75
German, gray	"	14.50
Snow white	"	17.00
Bauxite—Ga. mines: 1st grade	lg. ton.	5.00
Second grade	"	4.25 @4.50
Ala., f.o.b., 1st grade	"	5.00
Second grade	"	4.25@4.50
Bismuth—Subnitrate	lb	1.75
Subcarbonate	"	1.95
Bitumen, "B"	"	.03½
"A"	"	.05
"A" and "B"	"	.04½
Bone Ash	lb.	$ .02¼@.02½
Borax	"	.07¼@.07½
Calcined	"	.25
Bromine	"	.40
Cadmium—Metallic	"	1.40
Sulphate	100 lbs.	2.00@2.50
Calcium—Acetate, gray	"	1.55
" brown	"	1.05
Carbide, ton lots, f. o. b. Niagara Falls, N.Y.	sh. ton	80.00
Carbonate, ppt	lb.	.05
Chloride, com'l	100 lbs.	.75
Best	"	.80@1.00
Sulphite	lb.	.05
Cement—		
Portland, Am., 400 lbs.	bbl.	1.50@2.00
Belgium	"	1.95@2.20
English	"	2.45@2.55
German	"	2.30@2.70
"Rosendale," 300 lbs.	"	1.05
Sand cement, 400 lbs.	"	1.55@1.95
Slag cement, imported	"	1.65
Ceresine—		
Orange and Yellow	lb.	.13
White	"	.14
Chalk—Lump, bulk	sh. ton	2.60
Ppt. per quality	lb.	.03¾@.06
Chlorine—Liquid	"	.30
Water	"	.15
Chrome Ore—		
(50% ch.) ex ship, N. Y.	lg. ton	24.00
Sand, f.o.b. Baltimore	"	33.00
Bricks, f.o.b., Pittsburg, M		175.00
Clay, China—Am. com., ex-dock, N. Y.	lg ton	8.00
Am. best, ex-dock, N. Y.	"	9.00
English, common	"	12 00
Best grade	"	17 00
Fire Clay, ordinary	sh. ton	4.25
Best	"	6.00
Slip Clay	"	5.00
Coal Tar Pitch	gal.	.08
Cobalt—Carbonate	lb.	1.75
Nitrate	"	1.50
Oxide—Black	"	2.26@2.30
Gray	"	2.28@2.40
Smalt, blue ordinary	"	.10
Best	"	.20
Copperas	100 lbs.	.40@.45
Copper—Carbonate	lb.	.18
Chloride	"	.25
Nitrate, crystals	"	.35
Oxide, com'l	"	.19
Cream of Tartar—Crys.	"	.19¼@.19½
Powdered	"	.19¾@.20
Cryolite	"	.06½
Explosives—		
Blasting powder, A. 25 lb. keg		2.50
Blasting powder, B	"	1.25
"Rackarock," A	lb.	.25
"Rackarock," B	"	.18
Judson R.R. powder	"	.10
Dynamite (20% nitro-glycerine)	"	.13
(30% nitro-glycerine)	"	.14
(40% nitro-glycerine)	"	.15
(50% nitro-glycerine)	"	.16½
(60% nitro-glycerine)	"	.18
(75% nitro-glycerine)	"	.21
Glycerine for nitro (32 2-10° Be.)	"	.13@.13¼
Feldspar—Ground	sh. ton	8.00@9.00
Fluorspar—		
Am. lump, 1st grade	"	14.40
2d grade	"	13.90
Gravel & crushed, 1st g	"	13.40
2d grade	"	12.40
Ground, 1st grade	"	17.90
2d grade	"	16.50
Foreign, lump	"	8.00@12.00
Ground	"	11.50@14.00
Fuller's Earth—Lump	100 lbs.	.75
Powdered	"	.85
Refined lump	"	1.25
Graphite—Am. f. o. b. Providence, R.I. lump	sh. ton	8.00
Pulverized	"	30.00
German, lump	lb.	.01¼
Pulverized	"	.01½@.02
Ceylon, common	"	.03¾
Pulverized	"	.04@.08
Italian, pulv	"	.01¼
Gypsum—Ground	sh. ton	8.00@8.50
Fertilizer	"	7.00
Rock	lg. ton	4.00
English and French	"	14.00@16.00
Infusorial Earth—Ground. American, best	"	20.00
French	"	37.50
German	"	40.00
Iodine—Crude	100 lbs.	2.45
Iron—Muriate	lb.	.05
Nitrate, com'l	"	.01¼
True	"	.04
Oxide, pure copperas col	"	.05@.10
Purple-brown	"	.02
Venetian red	"	.01@.01½
Scale	"	.01@.03
Kaolin—(See Clay, China).		
Kryolith—(See Cryolite.)		
Lead—Acetate, white	lb.	.07
Com'l, broken	"	.06½
Brown	"	.05½
Nitrate, com'l	"	.06½
" gran	"	.8¼
Lime—Com., ab. 250 lbs	bbl.	.70
Finishing	"	.80
Magnesite—Greece. Crude (95%)	lg. ton	6.50@7.00
Calcined	sh.ton	14.00@15.00
Bricks	M.	170.00
Am. Bricks, f o.b. Pittsburg	"	175.00
Magnesium—		
Carbonate, light, fine pd	lb.	.03¾
Blocks	"	.06@.09
Magnesium—		
Chloride, com'l	lb.	$ .01¾
Fused	"	.20
Nitrate	"	0.60
Sulphate	100 lbs.	.90
Manganese—Crude-pow'd 70@75% binoxide	lb.	.01¼@.01½
Crude, pow'd 75@85% binoxide	"	.01½@.02½
85@90% binoxide	"	.02½@.03¼
90@95% binoxide	"	.02¾@.05½
Carbonate	"	.16@.20
Chloride	"	.04
Ore, 50%, Foreign	unit	.26¼
Domestic	"	.30
Marble—		
Flour	sh. ton	6.00@7.00
Mercury—		
Bichloride	lb.	.77
Mica—N. Y. gr'nd, coarse	"	.03@.04
Fine	"	.04@.05
Sheets, N. C., 2x4 in.	"	.30
3x3 in.	"	.80
3x4 in.	"	1.50
4x4 in.	"	2.00
6x6 in.	"	3.00
Scrap, f.o.b., Dillsboro, N. C.	sh. ton.	25.00
Mineral Wool—		
Slag, ordinary	sh. ton	19.00
Selected	"	25.00
Rock, ordinary	"	32.00
Selected	"	40.00
Monazite—92%	"	140.00
Nickel—		
Oxide, No. 1	lb.	1.00
No. 2	"	.60
Sulphate	"	.20@.21
Oils—Black, reduced 29 gr.		
25@30 cold test	gal.	.09¾@.10¼
15, cold test	"	.10¾@.11¼
Zero	"	.11¾@.12¾
Summer	"	.09¼@.09¾
Cylinder, dark steam ref	"	.08¾@.10¼
Dark filtered	"	.11¾@.16¼
Light filtered	"	.14¾@.17¾
Extra cold test	"	.21¾@.26¾
Gasoline, 86° @ 90°	"	.16@.21
Naphtha, crude 68@72°	bbl.	9.60
"Stove"	gal.	.12
Linseed, domestic raw	"	.57@.61
Boiled	"	.63
Calcutta, raw	"	.85
Ozokerite	lb.	.11½
Paints and Colors—		
Chrome green, common	"	.05
Pure	"	.16
Yellow, common	"	.10¾
Best	"	.25
Silica Graphite, thick	"	.12
Thinned	gal.	1.15
Lampblack, com'l	lb.	.04½
Refined	"	.07
Litharge, Am. powd.	"	.05½@.06
English flake	"	.07½@.08
Glassmakers	"	.07½
Metallic, brown	sh. ton	19.00
Red	"	16.00
Ocher, Am. common	"	9.25@10.00
Best	"	21.25@25.00
Dutch, washed	lb.	.04¾
French, washed	"	.01¼@.02
Orange mineral, Am.	"	.07¾@.08
Foreign, as to make	"	.08@.11
Paris green, pure, bulk	"	.12
Red lead, American	"	.05¾
Foreign	"	.07¼@.08¼
Shellac, "D. C."	"	.30
Native	"	.15
Turpentine, spirits	gal.	.36
Ultramarine, best	lb.	.25
Vermilion, Amer. lead, Quicksilver, bulk	"	.10@.14
	"	.70
Foreign	"	.80@1.00
White lead, Am., dry	"	.05
American, in oil	"	.05¾
Foreign, in oil	"	.07¾@.09⅜
Whiting, common	100 lbs.	.40
Gilders	"	.54
Zinc white, Am., ex. dry	lb.	.04⅜@.04¾
American, red seal	"	.06½
Green seal	"	.07
Foreign, red seal, dry	"	.05½@.05⅝
Green seal, dry	"	.07¼@.09⅞
Potash—Caustic, ord.	"	.04½@.05
Elect. (90%)	"	.06½
Potassium—		
Bicarbonate cryst	"	.08¼
Powdered or gran.	"	.14
Bichromate, Am.	"	.08¼
Scotch	"	.08½
Carbonate, hydrated	"	.04½
Calcined	"	.04
Chromate	"	.35
Cyanide (98@99%)	"	.25
Iodide, bulk	"	2.30
Permanganate, pure cr.	"	.11@.11¼
Prussiate, yellow	"	.14⅜@.15
Red	"	.37
Silicate	"	.06
Sulphide, com'l	"	.10
Quartz—(See Silica).		
Rosin—		
Com. strained (280 lbs.)	bbl.	1.60
Best strained	"	2.80
Medium	"	1.80
Salt—N Y com fine	sh. ton	2.00
N. Y. agricultural	"	1.50
Saltpeter—		
Crude	100 lbs.	3.35
Refined	"	4.25
Silica—Best foreign	lg. ton	10 00@11.00
Ground quartz, ord	sh. ton	6.00@8.00
Best	"	12.00@13.00
Lump quartz	"	2.50@4.00
Glass sand	"	2.75
Silicon—Carbide	lb.	.05
Silver—Chloride	oz.	$0.65
Nitrate	"	.39½
Oxide	"	.85@1.10
Slate—Ground, black	sh. ton	7.50@8.75
Ground, red and olive	"	20.00
Sodium—Acetate, com'l	lb.	.04¼
Bichromate	"	.08¼
Chlorate, com'l	"	.09@.09¼
Hyposulphite, Am.	100 lbs.	1.80
German	"	2.00
Nitrite, 96@98%	lb.	.08
Peroxide	"	.45
Phosphate	"	.02½
Prussiate	"	.12½
Silicate, conc	"	.05
com'l	"	.01
Sulphate, com'l	100 lbs.	.70
Gran., puri'd	lb.	.03
Sulphide	"	.01¾
Sulphite crystals	"	.02½
Tungstate, com'l	"	.35
Strontium—Nitrate	"	.08
Sulphur—Roll	100 lbs.	1.75
Flour	"	1.80
Flowers, sublimed	"	2.05
Talc—N. C., 1st grade	sh. ton	13.75
N. Y., Fibrous	"	8.00@9.00
French, best	100 lbs.	1.25
Italian, best	"	1.62½
Tar—Regular	bbl.	1.90
Oil barrels	"	3.75
Tin—Bichloride	lb.	.09½@.10
Crystals	"	.20
Muriate, 36°	"	.09
52°	"	.15
Oxide, white, ch. pure	"	.40
Uranium—Oxide	"	2.25@3.00
Zinc—Metallic, ch. pure	"	.09@.10
Carbonate	"	.15
Chloride	"	.05
Dust	"	.06¼@.06½
Sulphate	"	.02@.02⅛

THE RARE ELEMENTS.

Prices given are at makers' works in Germany, unless otherwise noted.

	Cust. Meas.	Price.
Barium—Amalgam	grm.	$1.19
Electrol	"	5.71
Beryllium—Powder	"	5.95
Crystals	"	9.04
Nitrate (N Y.)	oz.	1.50
Boron—Amorphous, pure	grm.	.19
Crystals, pure	"	1.43
Nitrate (N. Y.)	lb.	1.50
Cadmium—Sticks	kg.	1.55
Sheets	"	2.83
Granulated	"	2.38
Powder	"	1.90
Calcium—Elect	grm.	4.28
Cerium—Fused	"	2.02
Nitrate (N. Y.)	oz.	1.25
Chromium—Fused, Elect.	kg.	5.95
Pure powder 95%	"	1.79
Chem. pure cryst	grm.	.20
Cobalt—(98@99%)	kg.	6.66@8.33
Pure	"	30.94
Didymium—Powd.	grm.	3.81
Fused, Elect.	"	5.47
Nitrate (N. Y.)	oz.	2.50
Erbium	grm.	3.09
Nitrate (N. Y.)	oz.	2.50
Germanium—Powder	grm.	33.32
Fused	"	35.70
Glucinum—Powder	"	5.95
Crystals	"	9.04
Nitrate (N. Y.)	oz.	2.75
Indium	grm.	3.57
Iridium—Fused	"	1.07
Powder	"	.95
Lanthanum—Powder	"	4.28
Electrol, in balls	"	9.04
Nitrate (N. Y.)	oz.	2.25
Lithium	grm.	2.38
Nitrate (N. Y.)	oz.	.60
Magnesium—Ingot	kg.	6.19
In wire or ribbon	"	9.99
Powdered	"	5.95@7.14
Sheet	"	9.04
Molybdenum—Fused	grm.	.15
Powder, 95%	kg.	2.62
Niobium	grm.	3.81
Osmium	"	.94
Palladium—Wire	"	.86
Sponge	"	62
Potassium—In balls	kg.	17.85
Rhodium	grm.	2.38
Rubidium—Pure	"	4.76
Ruthenium—Powder	"	2.38
Rutile—Crude	kg.	.43
Selenium—Com'l powder	"	26 28
Sublimed powder	"	35.70
Sticks	"	28.56
Silicium—Com'l	"	28.56
Chem. pure crystals	"	59.50
Amorphous	"	27.36
Sodium (N. Y.)	lb.	.65
Strontium—Electrol	grm.	6.19
Tantalium—Pure	"	3.57
Tellurium—Ch. p, sticks	kg.	107.00
Chem. pure powder	"	83.30
Thallium	"	26.18
Thorium—Nitrate 49@50% (N. Y.)	lb.	5.00
Titanium	kg.	47.60
Uranium	"	190.40
Nitrate (N. Y.)	oz.	.25
Wolfram—Fused, elect.	kg.	238.00
Powder, 95@98%	"	1.43
Chem. pure powder	"	6.43
Yttrium	grm.	3.33
Nitrate (N. Y.)	oz.	2.75
Zirconium—Com'l	kg.	119.00
Nitrate (N. Y.)	oz.	.75

NOTE.—These quotations are for wholesale lots in New York unless otherwise specified, and are generally subject to the usual trade discounts. This table is revised up to April 10. Readers of the ENGINEERING AND MINING JOURNAL are requested to report any corrections needed, or to suggest additions which they may consider advisable. See also Market Reviews.